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EDITORIAL



CHRISTMAS GREETINGS

As 1960 comes to a close the Festive Season commences and mankind all over the world extends his hand in greetings to his fellow man. Because of differing beliefs—political, racial, religious and educational—mankind has as yet never reached a state of mutual agreement, and yet at this time he greets his fellow man on terms of friendship and enjoyment of the festivities of this annual period.

Amateur Radio is unique in its ability to transmit messages of goodwill from state to state, from country to country, and in so doing maintains a public relationship which could never be done by any other means.

The Geneva, 1959, conference of the International Telecommunications Union illustrated graphically that the Amateur Service was dangerously close to suffering a great loss in frequency space, and if it hadn't been for strong representation by many countries—including Australia through the Wireless Institute's representative (the late John Moyle)—it could have even faced annihilation.

It's to the credit of the Amateur Service that the I.T.U. gave it such a just hearing and took steps to write into the Geneva Frequency Table bands and regulations governing its operation which must remain for all time if the Service continues to justify its existence in the future as it has done in the past. But it must justify its future existence! In the years ahead there is going to be more and more demand for channels for this service and that service, and the Amateur Service will have to justify itself and the use to which it puts its frequency allocations along with every other frequency user.

As far as Australia is concerned its allocation problems have not been finally settled in accordance with the proposed Geneva Frequency Table which is due for ratification in May, 1961. Various frequency users were so unsatisfied with the outcome of the Geneva Conference that the Postmaster-General, Hon. C. W. Davidson, O.B.E., called together a special Ad Hoc Committee known as the Radio Frequency Allocation Review Committee whose task it is to review the allocation to the Australian

frequency users in the light of the Geneva Conference with a view to determining the use to which the frequency spectrum is used in the best National interests of the Commonwealth of Australia. The outcome of this Committee's deliberations will not be known for some considerable time because the entire frequency table must be reviewed. The W.I.A. has a representative on this Committee whose main task is to defend the Amateur Service allocations.

Insofar as the individual Amateur is concerned, his task in the years ahead is a relatively simple one; he must use the allocations granted to him and he must encourage others to do the same. In a country like Australia, with its vast area and limited population, a high percentage of Amateur licensees is of paramount importance. Each of us can assist in this direction. The country is crying out for technical people in every section of the electronic and allied industries. Amateur Radio provides the starting off point, as evidenced by the already high percentage of key technical posts held by Amateurs.

Every Amateur should encourage young people to take up Amateur Radio for it serves a vital need to initiate that first desire to continue the study of electronics which leads a young man (or woman) to pursue his/her course in life in this field. If Amateur Radio only did this (but of course it does a lot more), it is serving a great need in the national interest.

There are many opportunities to interest young people in Amateur Radio; school clubs, the Boy Scout movement (already a body of boys involved in a form of communication) and boys' social clubs. It is here that the future progress of youth is generated. Make it your job to interest one boy in the hobby of Amateur Radio next year and you will see the fruits of your effort. If the 4,000 odd licensees in the Commonwealth of Australia did this, and each was successful in his "candidate" becoming an Amateur, the present number would double itself in one year.

To protect our future is our own responsibility. Let's start in 1961.

A Merry Christmas to you all.

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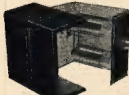
The AR-3 covers frequencies from 550 Kc. to 30 Mc. in four bands, clearly marked on the slide-rule dial. Designed for high circuit efficiency and ease of assembly, the AR-3 combines good sensitivity and selectivity with flexible overall operation. The power supply is transformer operated for safety and high efficiency.

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CABINET: Plastic impregnated fabric covered cabinet with aluminium panel. Part No. 81-12A. Wgt. 5 lb. Size: 11½ x 9½ x 6½ in.

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Wgt.: 12 lb. Size: 5½ x 8½ x 13 in.

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PRICE: £21/16/9



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CAPACITANCE METER

M. NICHOLS,* VK3ABO

IN these days of the increased use of small capacitors in radio equipment, I have found it necessary to have a suitable instrument to measure them. After a recent experience of going through hundreds of mica, ceramic, and air dielectric types, looking for the particular value of components I required, and endeavouring to decipher the various color codes (of which I have an innate distrust anyhow, there being so many systems in use, particularly among disposals equipment), I finally stopped and started to think if there was not some cheap and effective way of solving the problem.

After considering the many ways by which these capacitors could be measured, I decided to put a few ideas, gathered from various sources, together into something practical.

As can be seen from the circuit, it is based on our old friend the grid dip oscillator and a mutually coupled test oscillator.

Capacitor C8 should be of the straight line frequency type, a single gang broadcast type with two-thirds of its plates removed will do nicely. The distance between L1 and L2 should be about 2 inches, or a distance which will just permit the dip indication to be observed when the test circuit is resonated. The meter can be any of the various disposals types readily available between 500 μ A. and 2 mA.

Having built the "thingummy" switch it on and stand back. After a few seconds M1 should indicate that the oscillator is going. With no condenser fitted at point CX, put C8 in full mesh or maximum capacity, and adjust C1 till a dip is indicated by M1.

You are now ready to calibrate. Take a handful of capacitors of known value (if you can read their markings!), fit

them one at a time across the points CX and calibrate the dial of C8 according to the new indication of resonance by M1.¹

This instrument is primarily intended for the measuring of capacitors from 0-1,000 pF, but useful indication can be obtained to 10,000 pF. Accuracy is within 5% to 1,000 pF.

Frequency of oscillation is not important, but if circuit details are followed it will be about 4 Mc.

The instrument can be built about 30/-, but I, like most Hams, spent a while scratching in the junk box like the proverbial chicken and after about ten minutes came up with the necessary bits.

About three hours later, whistling with glee, I was further scratching, this time in corners after the many condensers I had flung with many nasty curs words, several hours earlier, and in about ten minutes had retrieved enough to more than pay me for the trouble in building the gear—and I still have the "thingummy" for the next time.

Several of my friends have now built this gadget, and none have reported any difficulty. So heads down, fellows, and like the chicken, start scratching!

[The suggestion is offered that it would be practical to build only the front end of this device, so arranged that it could be plugged into an existing g.d.o., which would then serve as the back end of the unit. If this idea was adopted, it would be necessary to ensure that the input plug system adopted would not introduce stray and variable capacitances into circuit, thereby upsetting calibration. A rigid-lead system would be required.—Ed.]

1 By plotting a graph through the calibration points obtained, a more accurate calibration would result. Condensers are generally sold with a plus or minus 10% tolerance.—Ed.

*30 Taylor Street, Clayton, Vic.

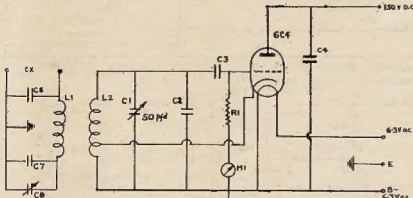


Fig. 1—Capacity Meter.

C1—50 pF.
C2—100 pF, silver mica.
C3—47 pF, silver mica.
C4—10,000 pF, 350V d.c.
C5—2 μ F, 400V d.c.w.
C6—100 pF, silver mica.
C7—47 pF.

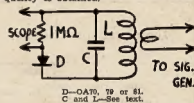
C8—100 pF, variable, s.l.f.
C9—400 pF.
R1—35K ohms.
R2—47K ohms.
M1—500 μ A. to 2 mA.
L1—26 turns closewound, $\frac{1}{4}$ inch diam.
L2—30 turns, spaced $\frac{1}{2}$ inches, tapped 8 turns.

Winding Coils for Low Frequencies

TO wind coils for low frequencies, particularly where a grid dip oscillator covering these frequencies is not available, the problem arises—when are the turns right, etc.

The author's idea was to use vacuum tube voltmeter, loosely coupled to the coil under test, to measure a rectified r.f. voltage developed from an external source. This didn't work, so a c.r.o. was tried and presto! Eureka.

Across the main winding put an empirical value of condenser. Shunt this with a germanium diode and resistor in series, and measure the rectified voltage developed across the resistor. Apply this to the vertical plates of the scope, and set the sweep frequency for a sub-multiple of the signal generator modulation, say 200 c.p.s. for a 400 c.p.s. modulation as in standard service generators. Wind a two-turn link around the coil and couple output of signal generator to this, set attenuator flat out. Adjust generator for maximum deflection, being sure to get the fundamental and not a harmonic. Biggest deflection is fundamental. Adjust coil turns or condenser until desired frequency is obtained.



D—OATO, 7B or 8L.
C—1 μ F—See text.

A "Q" multiplier coil was wound on a Ducon ferrite toroidal former using the above method. Frequency was 600 Kc. initially, and after a few minutes trying different values of condenser, we settled for 182 pF. with 63 turns. Of course in the actual circuit, allowance must be made for tube input capacity and strays, so this is about 185 pF. plus a trimmer.

Some generators go down to 150 Kc. so coils down to this frequency can be easily wound using this method (but of course you must make friends with your local t.v. serviceman). The actual job only takes about half an hour, per coil, and there is no reason why special high selectivity i.f.t.s., etc., cannot be wound on these toroidal formers—it is just too simple—with the right gear.

To set it up for 85 Kc., use the b.f.o. coil from a BC453, in a simple oscillator and modulate with an audio tone. This then becomes the signal generator, and home-made i.f.t.s. can be easily wound.

G. Clarke, VK1RIG.

MORSE TESTS

Commencing on Tuesday, 5th October, and every second Tuesday of each even month, ZKF started Morse Tests on behalf of the N.Z.A.R.T. Test consists of five minutes plain language at 15, 20, 25 and 30 w.p.m., commencing at 1900H hours. No other transmissions will be made on these schedules.

Frequencies of operation are 3324 and 6885 Kc. Time 1700K (E.A.S.T.)

Super Simple Sideband

IAN MacMILLAN,* VK3ZDG

ON building my second sideband transmitter, and getting it to go, I found that I had a very nice brew of s.s.b., and being charmed by the utter simplicity of it all, I decided to write it up for "A.R."

The circuit is basically that of W6EI, published in the 14th edition of the "Radio Handbook," adapted for locally available parts and material.

The exciter itself uses only four valves, from microphone to a.s.b., and the description will be divided between the r.f. section and the audio section.

THE AUDIO SECTION

This comprises an EF86 (or any other favoured tube) as a microphone pre-amplifier, a 6C4 as an audio amplifier, and a 12AT7 as a pair of cathode followers.

Only one non-critical transformer is used, and a commercially available phase shift network is employed, although values are given for those who

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would rather brew their own. Provision is made for painlessly switching to either sideband, or for true a.m. (d.s.b. plus carrier).

It is suggested that T1 be a plate to 600 ohm line output transformer, as found in many disposals equipment, but almost any audio step-down transformer will do, from 2:1 to 10:1 in turns ratio. Some transistor interstage transformers (not the miniature ones) may do. A phase splitter is another alternative, and if this idea is used, it is suggested that one of the double-triode types be employed, because of their better balance.

The 2K linear potentiometer across the secondary of T1 may be replaced by a 500 ohm potentiometer with a 1,500 ohm resistor connected to one side and a 270 ohm resistor to the other. The end of the 1,500 ohm resistor should go to pins 1-5 of the phase shift network, and the end of the 270 ohm resistor to pins 3-7. This will bandsread the control, and make adjustment easier.

Linear carbon pots., incidentally, have the letter "A" following the value, while ordinary logarithmic pots. have the letter "C".

The 2 μ F. 200v. capacitors are Micro-cap types. Electrolytics should not be used because of leakage, but if you've got the room for some old fashioned "blocks" out of your junk box, by all means use them.

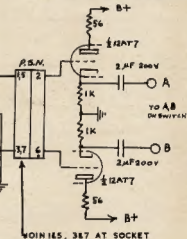
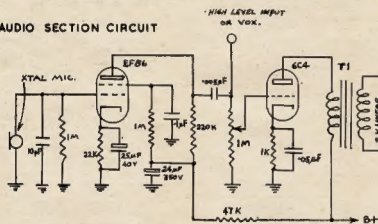
The pair of 1K ohm resistors in the cathode of the 12AT7, and the pair on the other side of the audio switch, should be fairly well matched, and a check with the ohm-meter is in order.

THE R.F. SECTION

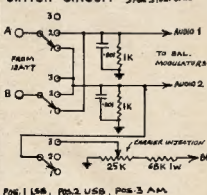
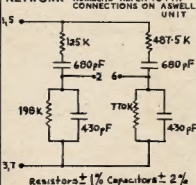
This consists of a 12AU7 crystal oscillator (or a v.f.o., or to taste) driving two germanium diode balanced modulators and utilising an R/C phase shift network for the r.f.

The r.f. phase shift network is a bridge type, with C1 and R1 providing $+45^\circ$, C2 and R2 -45° , the resultant voltage being 90° with respect to the

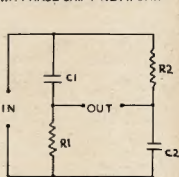
AUDIO SECTION CIRCUIT



SWITCH CIRCUIT 374 374. OAK

ASWELL PHASE SHIFT
NETWORK NUMBERS REFER

R.F. PHASE SHIFT NETWORK



input voltage. The only thing you have to know is that $X_c = R$ at the frequency of operation.

At 4.8 Mc. (which is the frequency I used), $R = 51$ ohms (go through a few 47 ohms 5% I.R.C. types), $C = 680$ pF. $\pm 5\%$ (select a couple the same with the aid of the bridge you'll find at many radio parts stores; if no bridge, don't lose any sleep over it).

Don't let the balanced modulator circuit scare you—just look at the layout diagram! By the way, when soldering R1 and R2 into the circuit, use a pair of pliers as a heat sink to avoid changing their values. The tuned circuit has not been described, as the details will depend on the size of your former, the type of slug, and whether or not it is shielded—not to mention the frequency. I had 16 turns on $\frac{1}{8}$ " diam., but use a g.d.o. for this job.

GETTING IT TO GO

1. Equipment required:

- (a) One receiver,
- (b) One head (well screwed on).
- (c) One source of audio (whistles in mike; preferably audio oscillator, b.f.o. note from another receiver, what-have-you).

2. Equipment NOT required:

- (a) Cathode ray oscilloscope,
- (b) Vacuum tube voltmeter,
- (c) Electro-encelograph,
- (d) Geiger counter,
- (e) Digital computer,
- (f) Super sine wave oscillator.

Note.—If you have c.r.o.'s, etc., know how to use them, you won't be reading this, and if you staunchly maintain that you cannot align an s.a.b. exciter without elaborate equipment:

- (a) You've never played with one,
- (b) You've never tried to align one without gear,
- (c) You don't have (b) in 1 above.

Now having been moderately facetious, let's get down to tinkacks. Connect a piece of shielded wire, centre to slider of the 200 ohm sideband balance pot., outer to earth (common point in diagram). Hook the other end to your receiver and tune the latter to the crystal frequency. Apply voltage (very well filtered B+) to the exciter. Turn b.f.o. on, receiver on. Adjust oscillator coil for maximum output. Make sure the function switch is on one of the sideband positions and then adjust the carrier balances for a null (the two 1K pots.). If you can't get a null, you've either made a blunder or you've got a

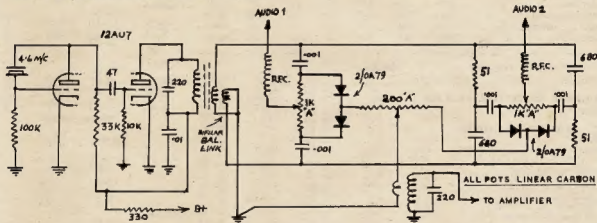
poor diode somewhere. If you can, it should be quite sharp. If the best you can do leaves a carrier with a T5 note, your h.t. is not filtered enough, or heater voltage hum is appearing. Your carrier has gone, but you are left with a couple of 50 or 100 c.p.s. sidebands. If these are fairly weak in the receiver, don't fret too much, as odds are they won't be very strong on the transmission.

Now pipe some tone, the sine-r or the better, into the mike input, keeping the level down. Make it about 1 Kc. If you can (C above middle C on your piano is about 1280 c.p.s.). Turn the b.f.o. off on the receiver and adjust the sideband balance control (200 ohm pot.) and the audio balance (2K, or 200 ohm with series resistors) for minimum audio tone. Put the function switch in the other sideband position and repeat.

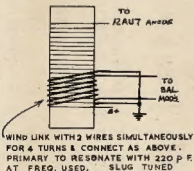
Go back and forth between the two sideband positions, making the adjustments until you have gone as far as you can go. Now turn the b.f.o. on and you will find that one sideband is much louder than the other. Identify the weaker sideband's note and adjust again to remove it. Swop sidebands and do this again until one sideband is way down and the other is paralytic, and this situation exists no matter which

(Continued on Page 9)

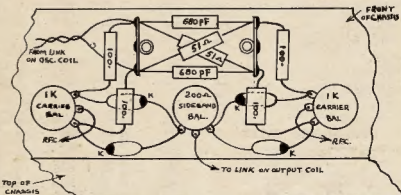
OSC. & BALANCED MODULATOR CIRCUIT



OSC. TO BAL. MOD. COIL



LAYOUT—BALANCED MOD. & R.F. PHASE SHIFT NETWORK



TASMANIA TAKE HONOURS AGAIN

CONGRATULATIONS go to the Tasmanian Division for winning the Memorial Trophy for the second time in succession from the Western Australian Division. Tasmania had the highest participation percentage of all the States, the second highest State log average, but was nearly bottom so far as the average of the top six logs is concerned. Despite the vast difference in the number of licenses between the States, there was very little difference between the number of logs entered from four of the six States.

All sections of the Contest were keenly contested and many fine scores were recorded. Highlights of the Contest were the high log scores achieved by VKs 2AHH, 5FT and 0WH in the Phone Section; VKs SENO and 6RU in the Open Section, and Messrs. Grantley, Smythe,

Wehr and de Balfour in the Receiving Section. All these had scores over 1,000 points. VK2QL's score of 552 in the C.w. Section was the highest for some years. The Northern Command Signals Amateur Radio Club's score of 1,350 in the Receiving Section was commendable as a group effort.

The repeated wins over the history of the Contest by the numerically smaller States shows how difficult it is for the larger States to win the Contest under the present scoring system. Much thought has been given to this matter in the past, but no new formula has been devised to make the Contest more equitable. The Federal Contest Committee would greatly appreciate any concrete suggestions for improving the scoring system in this very popular Contest.

REMEMBRANCE DAY CONTEST 1960 RESULTS

State	Total Score	Average Six	Licenses	Log Entry	Percentage	State Log Average	Total State Points
New South Wales	16735	856	1390	84	6.04	199	1867
Victoria	20797	844	1261	86	6.82	247	2262
Queensland	8914	665	443	48	10.8	196	1631
South Australia	17670	919	478	78	16.3	227	3802
Western Australia	13444	862	274	84	30.7	160	4984
Tasmania	12330	781	136	52	38.2	237	5495

STATE TROPHY

Tasmania 5495 points

HIGHEST STATE LOG AVERAGE

Victoria 247 points

SECTION LEADERS

Open—	Points
VK2BO—E. L. Andrews	908
3ALZ—I. F. Berwick	806
4RH—A. L. Hogg	747
5NO—L. H. Vale	1227
6RU—J. E. Rumble	1105
7DK—D. H. Kelly	750
9XK—S. R. Coleston	213
0IT—I. N. Thomas	330
Phone—	Points
VK2AHH—N. A. Hanson	1011
3APJ—P. J. Dettman	971
4UX—C. P. Singleton	958
5FT—F. K. Tapley	1049
6CL—I. H. Clinch	966
7RX—K. A. Johnston	971
0WH—H. L. Wright	1920

C.w.—	Points
VK2QL—F. T. Hine	552
3ZA—L. T. Frith	207
4JF—J. C. Files	217
5BK—K. D. Halsall	466
6VS—V. J. Kitley	276
7ZZ—I. A. Nichols	227

NEW SOUTH WALES

Top Six Logs—	Points
2KAO—	908
2RS—	883
2DO—	878
2ARM—	771
2FN—	681

Open—	Points
VK2RO—	296 898
3RS—	297 326
3DO—	259 879
3ARM—	331 771

C.w.—	Points
VK2QL—	179 552
3EL—	117 326
3YS—	124 349
2AXK—	86 267
3ARK—	67 310
3C—	62 170
3TC—	50 142
3HV—	47 140
3OW—	33 106
3EO—	27 72

Check Log: VK2NF.

VICTORIA

Top Six Logs—	Points
VK3APY—	971
3ADW—	890
3AXT—	856
3ALZ—	808
3ATY—	760
3AUG—	760

Phone—	Cont. Pts.		Cont. Pts.
VK3APY—	321 971	VK3ATS—	89 208
3ADW—	321 900	3AGV—	75 197
3AXT—	303 856	3AUG—	68 184
3AIT—	299 790	3AXW—	65 185
3AUG—	249 740	3AEL—	61 189
3DF—	221 644	3IC—	50 157
3B—	188 555	3E—	38 81
3LW—	203 532	3JE—	33 138
3AZM—	176 484	3APS—	56 132
3EN—	137 487	3GE—	85 128
3VL—	133 448	3AZA—	40 117
3ABT—	154 426	3XN—	35 116
3QV—	143 426	3RI—	45 118
3JB—	180 425	3ADU—	37 113
3AUL—	149 400	3YA—	43 119
3KC—	150 387	3AZR—	40 102
3EF—	150 385	3ADC—	38 99
3AHK—	147 353	3ZU—	37 99
3AUA—	141 379	3AMN—	30 94
3AGD—	100 314	3VQ—	18 84
3NJ—	125 297	3ZK—	27 79
3WB—	105 287	3SM—	27 79
3ADD—	105 283	3OM—	31 69
3ALJ—	100 280	3DU—	30 60
3EL—	101 272	3EK—	21 58
3GW—	111 271	3AWF—	24 53
3ATR—	81 269	3PZ—	26 52
3D—	90 267	3AT—	21 51
3DZ—	100 239	3WI—	11 28
3ADL—	83 238	3RN—	18 28
3ATP—	65 234	3ACN—	10 20
3B—	62 230	3Z—	10 20
3YQ—	74 217	3JO—	8 19
3ASB—	60 216	3AKJ—	8 11

Open—	Cont. Pts.		Cont. Pts.
VK3ALZ	255 806	VK3UJ	89 136
3APV	129 399	3XB	33 109
3KB	120 384	3DG	14 32
3XE	120 378	3PG	7 18

C.W.—	Cont. Pts.		Cont. Pts.
VK3ZA	90 307	VK3OH	18 63
3APQ	47 123	3XQ	18 43
3CK	43 117	3YI	39 44
3ARX	65 106	3KS	11 34
3NE	46 97	3YS	9 23

Check Log: VK3MH.

QUEENSLAND

Top Six Logs—	Points
VK4UX—	966
4RH—	747
4WJ—	728
4ZB—	695
4OM—	539
4TM—	488

Phone—	Cont. Pts.		Cont. Pts.
VK4UX	350 966	VK4KM	89 100
4WJ	332 728	4AF	53 83
4OM	188 539	4LE	30 82
4TM	153 435	4EZ	30 72
4TU	62 424	4ZM	27 72
4EB	101 361	4EF	33 56
4RU	121 259	4JR	14 48
4SU	84 254	4Y	13 47
4NS	83 246	4ZP	24 40
4BQ	85 223	4BK	15 37
4FH	71 218	4PE	15 34
4NC	87 197	4OL	13 27
4NG	81 178	4WS	18 17
4XN	68 141	4RW	9 16
4ZC	62 137	4ZL	9 16
4LB	41 138	4ST	11 11
4LA	34 103	4CN	6 11
4WO	41 106	4WD	6 8

Open—		Cont. Pts.			Cont. Pts.
VK4RH	—	378 747	VK4XJ	—	61 189
4ZB	—	303 595	4GH	—	18 38
C.w.—		Cont. Pts.			Cont. Pts.
VK4FJ	—	79 317	VK4LT	—	47 125
4KE	—	62 126	4CK	—	29 122
4XW	—	60 125	4JH	—	31 106
4SD	—	45 134	4GZ	—	30 63

SOUTH AUSTRALIA

Top Six Logs—		Points	
VK3NO	1227	5KT	1049
5WO	1013	5MS	778
3RU	778	5WC	688

Phone—		Cont. Pts.	
VK3PT	360 1049	VK3CJ	55 91
5MS	180 778	5BQ	28 28
5QX	123 680	5SS	48 37
5XK	204 607	5TN	33 80
5P	221 609	5TS	35 79
5GG	123 544	5PN	20 69
5AV	188 543	5XU	18 66
5EW	174 528	5WI	17 53
5T	153 555	5TW	23 51
5EP	120 346	5BA/P	11 50
5LQ	70 361	5PZ/P	10 45
5IM	62 254	5DY	20 38
5TM	122 240	5MA	24 35
5TJ	79 226	5DO	19 28
5GP	100 225	5CO	14 27
5L	79 778	5JB	13 26
5LC	82 192	5XA	20 26
5DF	78 184	5EK	18 24
5OK	77 166	5FQ	16 21
5HA	77 140	5PM	14 20
5WH	34 143	5HU	5 20
5OV	87 120	5UT	10 21
5BR	45 127	5ON	11 11
5JO	27 118	5PU	10 10
5CC	27 96	5JX	5 5
5KY	26 91		

Open—		Cont. Pts.	
VK3NO	530 1013	VK3AT	100 186
5WO	221 759	5LD	35 137
5SU	224 689	5KU	49 137
5WC	224 689	5HM	40 102
5TR	179 372	5GO	102 82
5FY	117 304	5K	38 80
		5EV	5 10

C.W.—		Cont. Pts.	
VK3BS	180 496	VK3YL	40 106
5XK	147 403	5RK	28 83
5MY	116 343	5BZ	34 84
5BD	78 294	5TE	37 82
5FM	80 313	5BX	23 79
5OR	41 131	5MZ	22 82

WESTERN AUSTRALIA

Top Six Logs—		Points	
VK3RU	1105	6CL	995
6TK	897	6KW	781
6W	729	6AD	653

Phone—		Cont. Pts.	
VK3CL	378 866	VK3GU	25 51
6KW	303 781	6VM	20 44
6WD	285 728	6WM	15 41
6AD	238 653	6LS	14 40
6SU	140 597	6G	13 39
6WL	123 341	6KJ	15 40
6XO	131 339	6MK	13 39
6XR	130 332	6G	10 34
6GH	118 315	6BS	8 32
6CW	102 285	6DX	13 23
6CS	101 280	6IS	14 28
6G	95 263	6W	15 28
6CR	84 234	6TY	12 28
6TR	72 183	6AL	10 28
6TK	77 186	6DR	7 26
6H	70 108	6ER	8 22
6RX	61 156	6XP	10 25
6OW	55 138	6TF	8 23
6KH	55 135	6ML	8 22
6CP	45 135	6FG	7 21
6MA	45 107	6GJ	7 20
6AG	39 106	6RO	7 20
6WA	38 102	6DC	7 20
6RW	32 96	6CM	8 19
6H	21 88	6BA	7 19
6BN	20 88	6BZ	7 19
6TR	30 85	6VT	7 17
6TL	33 82	6GB	8 17
6NF	25 70	6YL	6 17
6N	24 69	6JL	6 16
6CN	20 57	6KU	8 15
6BE	20 51		

Open—		Cont. Pts.	
VK3RU	425 918	VK3MS	29 72
6SM	352 937	6RS	16 38
6H	181 876	6W	16 36
6PH	181 494		
6Z	120 320		

C.W.—		Cont. Pts.	
VK3VK	167 276	VK3RP	10 22
6AJ	96 252	6MP	9 22
6W	28 117	6KF	7 19
6WT	25 61	6JA	7 16
6UT	11 32	6DF	8 14
6IG	10 27		6 13

Check Log: VK3GD.
Ineligible: VK3ZAL.

TASMANIA

Top Six Logs—		Points	
VK3TK	871		
7MF	778		
7DK	780		
7KA	673		

Phone—		Cont. Pts.	
VK3TR	383 971	VK3TF	38 53
7RL	311 845	7PJ	28 47
7MS	303 778	7WT	21 46
7MS	304 817	7JD	10 38
7SF	236 556	7CP	18 29
7AI	184 456	7JP	17 27
7MX	301 453	7C	32 26
7DW	131 377	7JO	14 22
7CK	91 338	7AB	14 21
7TT	153 353	7FM	9 19
7XK	139 353	7W	9 18
7LL	111 216	7EM	18 18
7MY	34 130	7TE	12 16
7DS	44 119	7AL	5 15
7DA	24 100	7BT	14 14
7BQ	43 96	7LE	13 13
7DR	14 70	7BJ	6 12
7FJ	53 70		

Open—		Cont. Pts.	
VK3TK	353 780	VK3WA	138 422
7SM	384 872		123 351
7KA	237 685	7TY	33 153
7KS	234 655	7GV	29 42
7LZ	185 686	7YL	7 32

C.W.—		Cont. Pts.	
VK3ZZ	88 227	VK3JB	30 74
7L	80 215		18 58
7LJ	80 210	7CH	8 21
7BJ	83 136		

PAPUA/NEW GUINEA

Open—		Cont. Pts.	
VK3XK	94 313		

Check Log: VK3RM.

ANTARCTICA

Open—		Cont. Pts.	
VK3RT	56 330		

Phone—		Cont. Pts.	
VK3WH	330 1920		
6CX	36 215		

RECEIVING SECTION

New South Wales—		Cont. Pts.	
WIA-12022	D. Granley	1031	pts.
L2026	D. C. Hayes	787	
	A. J. McIlroy	705	
L2211	R. C. Abernethy	682	
L2064	A. Mullen	586	
L2053	D. W. Sheppard	577	
L2074	R. P. Carroll	545	
L2204	S. Ferry	533	
	R. B. Pinnning	381	
	T. V. O'Donnell	394	
L2090	K. Dumban	359	
L2194	A. Bruce-Smith	347	
L2128	R. E. Gilbert	337	
	F. Vernon	319	
L2001	B. J. Smyth	311	
L2101	M. Richardson	303	
L2143	R. H. Butcher	248	
H. D. Russell		103	
L2034	T. G. Phillips	92	
L2019	R. Thompson	40	
L2052	T. Mills	11	

Victoria—		Cont. Pts.	
P. A. Barclay		872	pts.
I. Drysdale		738	
WIA-12005	I. D. Thomas	621	
L2055	M. R. Cox	643	
	P. Baarda	634	
L2069	J. Johnson	619	

L2042	E. Treblecock	601	
	M. Cadzow	513	
L2059	E. G. Stirling	484	
L2074	M. L. Hillard	446	
L2008	L. R. Woodman	411	
L2077	D. Fraser	379	
L2086	C. J. Walker	351	
	F. Seebor	328	
L2072	T. Howard	187	
L2087	J. Donald	130	

Queensland—		Signals	
Northern Command		1350	pts.
Amateur Radio Club		406	
C. T. Taylor		318	
T. Hutchesson		307	
WIA-12138/VK4	A. Westcott	299	
L2421/VK4	J. G. Sheard	250	
	T. Drew	230	
	L. C. Tully	205	
	J. F. Easles	206	

South Australia—		Cont. Pts.	
WIA-12328	G. Smythe	1088	pts.
	K. A. Wehr	1028	
L2035	T. Hutchesson	577	
	K. G. Minchin	577	
L2020	F. W. Atlin	538	
	M. S. O. J. Martin	507	
	N. Harvey	483	
L2031	C. M. Hutchesson	374	

Western Australia—		Cont. Pts.	
B. Wedemeyer		613	pts.
WIA-12003	F. H. Price	590	
L2005	D. S. Pratt	506	
	F. Price	437	
L2003	Mrs. R. S. Hardwick	413	

Tasmania—		Cont. Pts.	
WIA-12004	R. A. de Balfour	1185	pts.
	R. E. Rogers	823	
	G. Johnston	473	
W7010	W. Appleby	184	
L2007	M. L. Jenner	123	
	G. Rant	118	
W7013	N. Fisher	13	

NATIONAL FIELD DAY, 1961

The National Field Day Contest for 1961 will be held on Saturday, 11th, and Sunday, 12th February, 1961. Rules are the same as for the 1960 Contest and will be published in the January issue of "Amateur Radio."

Sections in the Contest are as follows:

- (a) Portable/Mobile Transmitting, Phone.
- (b) Portable/Mobile Transmitting, C.W.
- (c) Portable/Mobile Transmitting, Multiple Operators, Open.
- (d) Fixed Transmitting Stations working Portable/Mobile Stations, Open.
- (e) Reception of Portable/Mobile Stations.

Last year's Contest showed an increased popularity and it is hoped that this year's will be even better—and drier! There is a section in this Contest to suit everyone so start preparing now for what we make this Contest the best yet.

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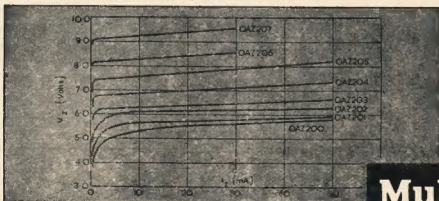


5% Tolerance Range	VOLTAGE (V)		
	Nominal	Min.	Max.
OAZ200	4.7	4.4	5.0
OAZ201	5.1	4.8	5.4
OAZ202	5.6	5.3	6.0
OAZ203	6.2	5.8	6.6
OAZ204	6.8	6.4	7.2
OAZ205	7.5	7.1	7.9
OAZ206	8.2	7.7	8.7
OAZ207	9.1	8.6	9.6

15% Tolerance Range	VOLTAGE (V)		
	Nominal	Min.	Max.
OAZ208	4.2	3.3	5.0
OAZ209	5.1	4.4	6.0
OAZ210	6.2	5.3	7.2
OAZ211	7.5	6.4	8.7
OAZ212	9.1	7.7	10.6
OAZ213	12.2	9.4	15.0

Voltage stabilisation down to exceptionally low currents is provided by Mullard Zener Diodes. This feature is particularly marked in the higher voltage types where stabilisation is provided at currents as low as one milliamp. In all types the dynamic impedance is low and the zener characteristic is very sharp.

Two ranges of these diodes are available. One with approximately $\pm 5\%$ tolerance voltages, and the other with approximately $\pm 15\%$ tolerance voltages. In both ranges the change of zener voltage with temperature is only very small, and the operating temperature is from -55 to $+150^{\circ}\text{C}$.



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MULLARD EQUIPMENT LIMITED, MULLARD OVERSEAS LIMITED

THE CRYSTAL CALIBRATOR No. 10

SUPER SIMPLE SIDEBAND

(Continued from Page 5)

A beat frequency r.f. generator is available on the English disposals market which may be of interest to Hams who need a compact measuring device. It was built for use with the No. 62 set and plugged into a socket on this set.

A v.f.o. covering from 250 to 500 Kc. is fed into a mixer through a band pass filter which filters out all the harmonics. A harmonic generating crystal oscillator of 500 Kc. is fed into the same mixer—these harmonics extend at least to 30 Mc. Thus for every crystal harmonic, there are two resultant frequencies produced at the output of the mixer.

A little simple arithmetic will reveal that for every dial position there will be four calibrations marked, and to complete the reading one simply places an even megacycle figure before the calibration.

For example, when the v.f.o. is on 380 Kc.:

Odd crystal harmonic (say 2.5 Mc.) plus 380 Kc. from v.f.o., gives 2835 Kc.

Odd crystal harmonic (say 2.5 Mc.) minus 380 Kc. from v.f.o., gives 2120 Kc.

Even crystal harmonic (say 3 Mc.) plus 380 Kc. from v.f.o., gives 3380 Kc.

Even crystal harmonic (say 3 Mc.) plus 380 Kc. from v.f.o., gives 2620 Kc.

These calibrators are advertised in "Wireless" and can be obtained from the various advertisers.—Ed.

On the dial, the figures, in this case, 535, 620, 380 and 120, appear underneath each other. Each division on the dial represents 2 Kc. Irrespective of the harmonic being measured, and interpolation to read 500 Kc. is quite easy. As always an absorption type wave-meter must be used when the harmonic is in doubt.

In the grid circuit of the crystal oscillator there is a neon tube arranged to discharge at the rate of about one c.p.s. This enables the output of the meter to be positively identified and it sounds something like WWV.

There are three tubes plus the neon, two 1T4 types and one 1R5. There is no provision for mixing the output of the meter and the signal to be measured, so a receiver is necessary to hear the best note.

The power supply needed is 12 volts d.c. for the filaments (there seems no reason why these could not be changed for 1.5v. operation) and about 300v. h.t.

Physically the unit is quite small, it measures 7 x 7 1/2 x 4 inches deep, and is very robust indeed. It arrived complete with carrying case, cables and spare valves, and was in new condition just like the advertisement stated. Test instruments apparently are not subject to customs duty, and the cost, including postage and customs agent's fee, was under £10.

—P. C. Ryan, VK9AZR.

★

"CQ" WORLD-WIDE S.S.B. CONTEST

The Contest commences 1500 GMT, Sat., 23th Jan., 1961, and concludes at 2100 GMT, Sun., 23th Jan., 1961, with only 24 hours of operating permitted.

The object is to work as many stations and as many prefixes on s.s.b. as possible (VK1, VK2, VK3, etc., count as separate prefixes).

Only one contact with any one station permitted, and no multipliers for multiband operation allowed.

The six hours of non operation must be consecutive, and must be clearly designated in the contest log. Logs not indicating the six hours' silence period will be disqualified.)

Scoring: Each station must exchange the usual Q and R report, followed by contact number, e.g. 56001, 56002, etc. All times to be shown in GMT.

Final score obtained by multiplying the number of different stations contacted by the number of different prefixes worked.

Include on separate sheet, operator's name, address, equipment details, number of stations contacted, number of prefixes worked, and final score.

A trophy to be highest world scorer, plus certificates to highest scoring contest in each Australian call area.

Logs must be returned to "Sideband" Editors, 12 Elm Street, Lynbrook, N.Y., not later than 26th March, 1961.

"OK" DX CONTEST

1. December 4, 1960, 0000 GMT to 1200 GMT.
2. C.w. only 1VX stations to contact OK stations.)

3. Bands: 3.5, 7, 14, 21 and 28 Mc. (one contact with each station on each band).
4. VK stations to call "TEST OK".

5. Exchange six figure number group (RST and three figures representing number of contact).

6. Three points for complete two-way contact.

7. Logs to be sent direct to Czechoslovakia Central Radio Club, Box 69, Prague 1, Czechoslovakia, not later than 15th Jan., 1961.
8. Separate logs required for each band, and each shall contain this data.

9. Date, time, sin. worked, nr. sent, nr. received, pls. claimed, and this statement—
10. "Herewith I declare that I have observed the rules of this contest as well as the regulations of the license authority in my country and that all the data stated in this log is true."

sideband is selected. You now have pretty reasonable s.s.b., and your mate who owns a c.w. may pull his head in if you get him to check it!

Incidentally, if you find you have u.s.b. with the switch at l.s.b., and vice-versa, don't fret, just swap wires A and B on the audio output, although you'll probably have to readjust the thing if you do this. Of course the easy way is to label the switch after you find out!

Now all you have to do is add a few amplifiers and mixers, and if anybody is interested we can tell you how to do these things the easy way in another article.

Low Drift Crystals FOR AMATEUR BANDS

ACCURACY 0.02% OF STATED FREQUENCY

3.5 Mc. and 7 Mc.

Unmounted £2 10 0
Mounted £3 0 0

12.5 and 14 Mc. Fundamental Crystals, "Low Drift," Mounted only, £5.

THESE PRICES DO NOT INCLUDE SALES TAX.

Spot Frequency Crystals Prices on Application.

Regrinds £1/10/0

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VICTORIA

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call No. rises	Cer. Cnt. No. rises	Call No. rises	Cer. Cnt. No. rises
VK6RU 2 947	VK9KW 4 122		
VK6MK 43 943	VK4RR 12 102		
VK5AD 45 943	VK3BZ 3 176		
VK4JJ 21 218	VK4RW 33 184		
VK3WL 14 211	VK3EE 10 153		
VK3ATN 25 204	VK9D 31 161		
New Members:			
VK3GH 83 171	VK2AGU 48 100		
Amendments:			
VK4DO 20 152	VK2AHH 41 135		

C.W.

Call No. rises	Cer. Cnt. No. rises	Call No. rises	Cer. Cnt. No. rises
VK3KB 10 283	VK4HR 8 216		
VK3CX 26 276	VK2KU 46 213		
VK4PJ 25 252	VK3RU 15 208		
VK3NC 19 255	VK3PL 30 202		
VK3FH 15 228	VK3RX 23 195		
VK3BZ 6 222	VK2EO 2 191		
Amendments:			
VK4DO 83 194	VK2AHH 62 130		
VK4RD 82 156	VK3KW 40 118		

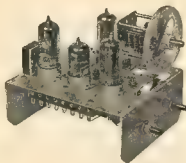
OPEN

Call No. rises	Cer. Cnt. No. rises	Call No. rises	Cer. Cnt. No. rises
VK2ACK 6 202	VK3BZ 4 231		
VK4PJ 32 208	VK3HG 4 225		
VK6RU 8 253	VK3WL 45 225		
VK6MK 74 247	VK3JU 61 221		
VK3NC 77 235	VK3KW 13 216		
VK4HR 7 233	VK3JE 12 210		
New Member:			
VK3RG 86 102			
Amendments:			
VK4DO 15 203	VK2AHH 73 172		

SPECIAL—WHILE THEY LAST!

MODEL 4/103 V.F.O. UNIT EXCITER

FREQUENCY RANGE: 144-148 Mc.



R.F. Power Output: Sufficient to drive an 832 or 2E26.
Valve Line-Up: Two 6CL6 oscillator multipliers, one 12AT7 multiplier, and one 5763 driver.
 The unit incorporates two different oscillator multipliers, one variable for establishing communication, one crystal-controlled fixed frequency oscillator for working.

£8/- EACH (Valves Extra)

AIR-WOUND INDUCTANCES

No.	Diam.	Turns per Inch	Length	B. & W. Equiv.	Price
1-08	1/2"	8	3"	No. 3002	5/3
1-16	1/2"	16	3"	No. 3003	5/3
2-08	3/8"	8	3"	No. 3006	6/3
2-16	3/8"	16	3"	No. 3007	6/3
3-08	3/4"	8	3"	No. 3010	7/4
3-16	3/4"	16	3"	No. 3011	7/4
4-08	1"	8	3"	No. 3014	8/5
4-16	1"	16	3"	No. 3015	8/5
5-08	1 1/4"	8	3"	No. 3018	10/6
5-16	1 1/4"	16	3"	No. 3019	10/6

**Take the hard work out of Coil Winding—
use "WILLIS" AIR-WOUND INDUCTANCES**

"WODEN" MULTI-MATCH MODULATION TRANSFORMERS

Features—
 ★ Potted type compound filled (vacuum impregnated).
 ★ Universal application.
 ★ Primary impedance range: 2,000 to 18,000 ohms.
 ★ Secondary impedance range: 200 to 21,000 ohms.
 ★ Highest efficiency—lowest weight per watt.
 ★ Easy to solder heavily silver-plated tags.
 ★ Above or below chassis wiring.
 ★ Capacity: 30 to 250 watts.

List No.	Audio Watts	Max. Sec. Current	Overall Size L. W. H.	Weight lb. oz.
UM1	30	60	3 1/2 x 3 1/2 x 3 1/2	5 8
UM2	60	120	5 1/2 x 4 1/2 x 5 1/2	11 8
UM3	120	240	5 1/2 x 5 1/2 x 5 1/2	14 8

Price: UM1 £7/9/9 inc. Sales Tax
 UM2 £10/13/3 " " "
 UM3 £12/2/6 " " "

PI-COUPLER FOR HIGHER POWER

Compact, handwired, high power pi-coupler inductor for an-a output. Rated for a max. 1,500v. d.c. at 500 mA. input. Higher voltages on c.w. and a.n.b. For max. efficiency the 10-metre coil is made of 1/4 in. silver-plated strip, 18 and 20-metre coils of 1/8 in. silver-plated wire, and the 40 and 50-metre coils of 12 B. & S. tinned-copper wire.

Input capacity 250 pF. max., output capacity 1,500 pF. max. A single pole five-position switch is provided which can be used for switching in parallel capacities when required.

Recommended input capacitor: Eddystone Type 817. Recommended output capacitor: Standard miniature 5-gang BC condenser which is suitable in this position up to 1 kw.

Price: £4/17/6 nett

"Willis" Med. Power Pi-Coupler, £3/19/6 inc. Sales Tax.

"Willis" Heavy Duty Pi-Coupler Choke, 25/- inc. S. Tax.

Q-MAX SCREW-TYPE CHASSIS CUTTERS

5/8"	26/7	1-3/8"	38/6
3/4"	26/7	1-1/2"	38/6
7/8"	29/4	1-3/4"	42/-
1"	34/10	2-3/32"	68/9
1-1/8"	34/10	2-1/2"	81/7
1-1/4"	34/10	1" Square	52/6

11/16" Square, 50/6
 One key supplied with each cutter
 Spare keys 1/6 each.

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Size	Price	Size	Price
3/8"	21/-	1-3/16"	35/-
1/2"	22/6	1-1/4"	42/6
5/8"	22/6	1-3/8"	47/6
11/16"	23/6	1-1/2"	47/6
3/4"	24/6	1-3/4"	57/6
1"	31/8	2"	62/6
1-1/8"	33/6		

Any special size requirements made to order

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THE HOUSE OF QUALITY PRODUCTS

428 Bourke St., Melbourne, C.I., Vic.

MU 2426

David Tanner, VK3ZAT

As you will have seen in Nov. "A.R.," I am your new V.h.f. Editor, so please start throwing things (news and ideas) at me.

Now for some news on the DX front. JAs have been rather scarce down in the south, but apparently the chaps in Brisbane and parts further north have been having their share during October. Some ionospheric disturbances in the early part of the month produced quite a high in W.U. and some choice DX from K88 and JA for a couple of the VK3 boys. The sporadic E season appears to have started off well with a good opening in the eastern States on 6th November.

Of interest to those chasing VKs for W.A.S. is the news that Kel VK3ZFQ is preparing for a trip to Alice Springs during the Christmas and hopes to operate under the call VK3ZFQ.

That's all from me for this month so get busy with those pens and let's have a bigger and brighter v.h.f. page.—3ZAT.

NEW SOUTH WALES

General.—The month of October saw an excellent lecture, was attended fast day and the monthly meeting was held. The speaker for the monthly meeting was Alan SQU, who covered the subject "The A.B.C. of Receiver Surveys." The speaker pointed out that in the surveys of some, he spent more time on front-end selectivity than on the passive network in the i.f. arrangement, pointing out that more trouble is caused by slight level adjacent channel interference than by any other cause. His ultimate v.f.s. rk. in block diagram is as follows: i.f. amplifier; i.f. amplifier; detector; a.f. amplifier; a.f. to second i.f. amp. (low gain); double tuned circuit to the 1st mixer. This i.f. arrangement can be used for selective reception of weak signals. The crystal oscillator should operate at as high a frequency as possible and is followed by a double tuned circuit to eliminate interference from other stations. It is permissible between multiplier stages, but the injection frequency should pass through the multiplier stages and cause only the wanted frequency to be injected.

All this so far is usually the converter. This should be followed by the tunable I.F., using at least one and preferably two tuned circuits before the second mixer to attenuate adjacent channel signals. The second mixer is followed by a passive filter, possibly crystal, having a band pass of suitable width with almost parallel sides from 10 db. down to better than 40 db. down. The remainder of the i.f. can be taken down to the baseband of the i.c. coupled to its oscillator, and the i.c. can contribute gain. Alan has inspired at least a few to correct faults in their existing rx set-ups.

The Spring Field Day, although overshadowed by two hamfests, saw a large number of hams and mobile operators. The weather was estimated, on travelling over 800 miles, and the other over 1,300 miles. This 800 mile band F.D. has proved popular over the years as it gives an opportunity for city stations to make contacts with stations in the country. The weather was a name and a call sign, but who are found to exist as a signal in their own spot on the band. Best DX for the day was 22V, M. Gibraltar to 22K, M. Mauritius—approx. 80 miles. Conditions were good during the day. The weather was damp in many locations. Another F.D. with the same purpose of linking city and country stations is programmed for New Year's Day. Further details in next month's

The night hunt, with BOA hiding, near Warwick Farm, was won by IZVL who also had the shortest distance. Other places were IAWZ and ERX. There were twelve starters with a total of 16 call signs abroad.

60 Mc: A band opening to JA and KH6 on Sat., 8th, saw ZCZF and 22VL active and making many contacts. That week-end was during a period of magnetic storms and hot sunspots, but few took advantage of the conditions. No other activity has been reported.

144 Mc: Further new stations have been heard—3AYN, 2ZGR, 2ZPI, 2ALY. The band is becoming really full. A new one has also appeared at Newcastle, with about a 2500 active stations, with about 10000 stations active on Sunday nights. MoCB operations is high priority, with more than 15 stations heard regularly.

The frequency checks on Sunday evening, as given by EFR have come to a temporary end, at 148 Mc. Phil has now covered every 100 Kc. to 166, and also 147 and 148 Mc. He is still available to give individual spots and frequency checks. Our thanks to Phil for this valuable service.

576 Mc.: Things are quiet on this band at present. The midwinter efforts have waned as the DX season on 50 Mc. starts. Here's hoping that this band doesn't die.—2ZAG.

VICTORIA

80 Mc.: A minor opening in the late afternoon of Oct. 29 gave some their first taste of sporadic E propagation. 4ZRV logged in a number of shacks in Melbourne and also at Numurkah by SVL. Rex also heard 3CT, 3ALZ and 3AZY.

Activity about the band included Alan ZASB and Glen ZSZB portable from Kingslake, and New ZASB Australia's Tashie Yokei, and conga, Ian Eric CKJ, still has a 1000 watt power and whilst he listens a OM he rarely transmits. Stan ZASB has returned to the band after several months absence. Jack ZDQD is given work DX this season; his 90 el Yagi is now airborne. ZCWC, Ouyen, is also determined to be in red 3V5. A new OM on the band is Kevin ZKJC; welcome. OM George ZCZG is experimenting with a tunnel diode VFO. An article for the mag., George? David ZJAT has a 6146 linear stocked up in his mobile a.s.b. rig, so watch out for a potent signal.

144 me: ZCG gives the following as active stations in the Eastern Zone ZZAQ Warragul, ZZDP and ZASW (ex-ZZBR) Sale, IDY Maffra, ZZAB Traralgon, ZZRV Morwell and ZZJM Newborough, whilst a station in Bairnsdale is expected shortly.

Ron SZEN Ballarat has changed frequency to 144.35, please note. Brian SZDW/3 Ballarat caused some interest when he came on the band in late October. He says he will be active on 50 Mc. from VK8 early in the New Year. Max SZCW hopes to be back on the air from a new QTH—still at Ouyen.

Conditions were good on the 21st, 22nd and 23rd Oct., when 3ANQ Warrnambool worked into Gippeland to 3ZCC, 3ZJM and 3ZBV (distances of order of 185 miles), whilst SPO Ballarat worked 3ZDP at Sale (180 miles). 148 Mc. is on the upgrade apparently, so all operators should keep a look out for that weak "rare and elusive."

Alan 12HN has indicated that he will be portable at Torquay over the holiday period and would very much like to make some contacts from there. Old calls that have reappeared lately include Bert 305 and David 12AY and Michael 12CZ.

Tramping for a moment on Barry SZAG's ground, I will make mention of the fact that 1SWH, 2APP and 2ZGM have been lately been testing crossband 3.5 Mc. to 144 Mc. These three stations are in southern VK2 and are definite possibilities for the VK3 gang. Noel 5OU/3ANS at Deniliquin is staking up on 144—low power at first and then something bigger later. He should be a fairly easy contact for Melbourne operators. (180 miles). So fellows, don't forget to turn your beams north in the coming months—you may work yourself a VK3.

235 Me.: Bill ZBU/T at Geelong has been receiving audio from Geoff 3AUX/T in Melbourne, but to date has been unsuccessful with Geoff's video signal 3ZCG at Kooweerup North is looking for contacts on this band, but can find no takers. Perhaps the Ross Hull will scare up some activity.

878 Mc - 3HF/32JN have been active on this band with mod. osc., superregen. equipment and have worked into Melbourne from the Pentland Hills area (about 60 miles). Jim and Neil have also worked 32IR in Brighton. No reports have been received of any activity with stabilised equipment in VK3. Is there any?

fox hunt. The October hunt was most disappointing to the organizers, 32JN, 32HF and Ron Bird (awaiting the results of the last exam). No hounds turned up and thus the night was a flop. Neil, Jim and Ron have decided they will not be fox, or should it be bunny, next time. The question now is, "Will there be any more hunts?" The answer is up to the hounds.

the meeting. The next Meeting: 14 members attended the October meeting and visitors included Max ZEGG, Barry ZZAG, Horst Martin and Cole Baldock. The advertised lecture by Mr Craig of the PMSG was not held because of his sudden illness. The Group hope that he will recover and attend a future meeting. At some future date, Jack ZEGG filled the gap with a brief talk on gas tubes ringing from V.H. tubes to Ignitions. Much discussion on v.h. affairs took place with ZZAG and ZEGG and the greetings from WJG were reciprocated. The meeting ended at 7.30. J.A.F. 1980 follows: 11th Dec. WJG Jan. 1980, March, and

23rd Apr Those going portable are advised to publicise their plans so as to avoid having to share mountains.

These are the last notes for 1980. I hope the past year has been a good one for you and I wish you all the best for the coming 1981. 73, 3QV,

QUEENSLAND

80 Mc., early October was very patchy or no MC Locals on include 4ZDS running 35w. to a 6 k. Yagi. 4ZHS has the beam 43 ft high. I had been told by a friend who had heard of a new one on about 60L also Max 4Wm I'm thinking of joining the 50 Mc. gang from Brisbane. Reasonable activity on 8th Oct. with 4ZGJ and 4ZS. 4ZV worked me on 40M and 4ZGL and 4PV. VKS was apparently very busy though. I worked five JAs (7, 8 and 9), quite good signals. The band was still open to JA's on the morning of the 9th and I'm also told KH6 appeared. Who worked them? I only had JA3 at 1235 and he faded out after we'd finished. He had been there since 1130. 4ZS than. Some scatter stuff appeared at 1400. 4ZDS collected 18 JA's!

18th, JA's 3 worked at SA 1440-1815 hours
18th, JA's 3 and 0 cornered by 42BZ. 2nd
Bob 4NG reported that he had Japs nearly
every day for the preceding week. I believe
he has passed the 1,500 JAs worked mark.
Congrats, Bob--think I'll shift to Rocky!.
words with Bill 4WD and Mick 4ZAA on 18th.
Both are making a comeback to 6 mx or may.

be it's me those making the comeback! 4Z8P mobile works 4w. Input! 30th, John 4PV and Len 4Z8S had DX tonight, worked 4ZOL 4ZAA, 4Z8P in Brisbane (about 65 miles); 30th, 4NG's weekly report - 23rd JA in morning at about 1400. 24th, Luncheon and evening 27th, JAS on 7 Mc. 37th, night reasonable worked 1,004JA 39th, went fishing, caught catfish and missed the VKX opening, but so Col 5RO and 5ZBJ

General New call signs to my notice: 4ZBQ 4ZCN, 4ZDJ (SI carrier here), 4ZCS, 4ZCF 4ZCR. Turn your beams north, you blokes and work some DX! There's a few outside Brisbane you know.—4ZBL

SOUTH AUSTRALIA

60 Mc. Signals from Japan have been frequently heard over the last month with considerable interest on several occasions. On 8th October the band opened at 1330 hours and the numerous contacts were made. Mike 5013 scored at least 13 and was quite pleased with the results. Of particular interest was KA1PW who was RS 59 at times and he was worked by Mike 5013 and your writer on this date. It is quite possible that it was the first time that a station bearing the KA prefix has been worked by VK3 on 80 Mc. VK3 5ZCR, 5ZBL, 5GK and others were also getting their share of contacts.

Most of the other openings during the month were very scratchy and very little was worked. One such opening occurred on 1st Oct, when Col BRO worked into JAS at approx. 1315 hours S.A.T.

through at 0315 hours S.A.T. but no JAs were heard or worked. At practically exactly the same time the next day, the f.m. station was again audible and JAs were very briefly heard, but none worked. All the above openings occurred at week-ends and it is known that on several week days such as the 30th the band showed promise of JA contacts but none were actually made.

On the afternoon of the 29th signals from VKs were heard for the first time this month and several contacts were made. Later in the evening at 2200 hours S.A.T., the Korean f.m. station was audible and a carrier on 50.3, but again no contacts.

Rick SZFQ now has the coveted piece of

paper and has been active on 80 Mc with a very f.b. signal and a high location. Welcome to 8, Rick. Eugene 5AV recently returned from VK3 and reports having had many QSOs with the VK3 boys from his 6 mhz mobile. Brian 5TN hopes to become mobile using an 833 in the final. Mobile activity is definitely on the increase now with many new stations on the air. Glibby 5CK, John 5JH and Murray 5JH are among the recent ones active this month. Vic 5JH has been out portable very frequently operating on one occasion from South Alms and working back to Adelaide with ease.

144 Mc.. Two mx activity is still confined mainly to crossband work by Mick 5ZDR and Garry 5ZFM, but as tropospheric openings on 3 may become more frequent towards the summer, attempts will be made to work Mt Gambier, Ballarat and Melbourne from Mt Barker.

...and the ...



The WARBURTON FRANKI Page

THE WORLD'S FINEST DIODES BY THE RENOWNED INTERNATIONAL RECTIFIER CORP. U.S.A.



'INTERNATIONAL' ENCAPSULATED SILICON DIODES

200 to 500 mA. rated; 400 P.I.V.

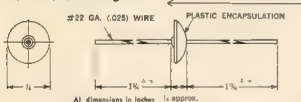
Designed specifically for Television and Commercial Equipment Applications.

These silicon junction diodes are especially recommended for television and other commercial equipment applications where low cost, miniaturization and high temperature operation are required. They will provide full-rated power under normal convection cooling, with no external heat sink required.

Typical Ratings and Characteristics

DIODE TYPES	2A4		504	
	Cap. Load	Res. Load	Cap. Load	Res. Load
Peak Inverse Voltage, Volts	400	400	400	400
Maximum RMS Input Voltage, Volts	140	280	140	280
Max. Rectified DC Output Current, ma (at 70°C ambient temp.)	250	300	350	500
Max. Surge Current (0.1 second), amps.	2	2	5	5
Max. DC Reverse Current (at 100°C full cycle average over 10 seconds), ma	0.5	0.5	0.5	0.5
Max. DC Voltage Drop at 500 ma. Volts at 200 ma. Volts	—	—	1.3	1.3
Minimum Surge Resistor, Ohms	10	—	4.7	—
Recommended Surge Resistor, Ohms	22	—	7.5	—

Dimensional Diagram



WRITE FOR BULLETIN SR208-A

INTERNATIONAL 6 & 12 AMP. STUD MOUNTED SILICON DIODES

Absolute Maximum Ratings (at 60 cps, Resistive or Inductive Load)

DIODE STYLES AND TYPES	6P TYPES								12P TYPES							
	6P5	6P10	6P15	6P20	6P25	6P30	6P35	6P40	12P5	12P10	12P15	12P20	12P25	12P30	12P35	12P40
Peak Reverse Voltage, Volts	50	100	150	200	300	400	500	500	50	100	150	200	300	400	500	500
RMS Input Voltage, Volts	25	70	105	140	210	280	350	350	25	70	105	140	210	280	350	350
Continuous DC Output Current, Volts	50	100	150	200	300	400	500	500	50	100	150	200	300	400	500	500
Rectified DC Output Current, ma	See Figs. 3 to 5								See Figs. 4 to 6							
Peak Surge Current (1 Cycle), Amp.	50	50	50	50	50	50	50	50	65	65	65	65	65	65	65	65
Operating Temperature Range	-25°C to 125°C Junction Temp.								-20°C to 125°C Junction Temp.							
Storage Temperature Range	-20°C to 150°C Ambient Temp.								-20°C to 150°C Ambient Temp.							
Terminal Resistance (Base to Junction/Cathode)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

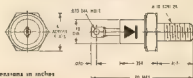
Electrical Characteristics

Forward Voltage Drop, Full Cycle Average @ 100°C Base Temperature	Typical	0.5 Volts at 5 Amperes								0.5 Volts at 12 Amperes							
Max. Leakage Current, Ma. (Full Cycle Average at 100°C Base Temperature at Rated Voltage)	Maximum	0.05 Volts at 5 Amperes								0.05 Volts at 12 Amperes							
		2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	

WRITE FOR
BULLETIN
SR-308-A



Dimensional Diagram



WARBURTON FRANKI

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SIDEBAND

Bud Pounsett, VK2AQJ
22 Seilfert Centre,
Queensbeyan, N.S.W.

INSTABILITY

Several of our sidebanders have encountered instability in Class A r.f. driver stages. The two tubes which seem to be the most popular in this stage are the 6AG7 and its miniature counterpart, the 6CL8. No doubt some of you have had troubles with other tube types which seems to indicate that the tubes are not to blame. The cure is usually to be found in adequate shielding as was pointed out by Col. VK2AQJ, in his excellent article in the October "A.R." (for which issue the Editor and his Committee are to be congratulated).

Maybe I carry this shielding business to extremes, but I must say I have not had trouble with "cranky" amplifiers. I run my filament leads in shielded wire; I run my h.t. leads in shielded wire, and if the wire must pass from one side of a shield to the other, I use a feed-through by-pass capacitor to make the connection. I also earth the shield braid several times along the way.

As for the shield across the socket, I find that one cut to fit the socket and shaped to allow only the plate pin on one side and all the other pins on the other, really pays off. Make your shield as wide and deep as the chassis lay-out will allow and tie your shield down to the chassis as much as possible. A shield earthed at one spot only could be "hot" for r.f. a few inches from the grounded point. By-passing cathodes, screens and heaters with disc ceramic capacitors with short leads should complete the job. Before you start the job, read the article entitled "Just Like 'QST', Except," in "A.R." Nov. '56, or "QST" Mar. '59.

ANOTHER PRODUCT DETECTOR

In an article appearing in May '56 "QST" a product detector using a gated-beam tube was featured. The article entitled "Please New Ideas in a Side-Band Receiver" has some rather interesting points. The tube used in the product detector is the 6DT6 originally designed for use as a limiter and phase detector in f.m. rx's. This tube is not available in Australia but a similar one, the 6DT6, is. Several of the s.b. gang have used the 6DT6 and report that the results are worth while. The output from the 6DT6 is sufficient to drive the output tube of your rx.

The i.f. input to the tube must be kept low, about 0.5v. peak, while 3 volts of injection from the b.f.o. to grid number 3 will be in order.

To adjust this product detector, the usual procedure is followed. Tune in a strong signal, disable the b.f.o. and adjust the i.f. coupling and the 500 ohm potentiometer in the cathode circuit for least or no audio output. A vacuum tube voltmeter is very helpful in obtaining the right levels at each grid. The April '58 issue of "Radiotechnics" contains technical data on the 6DT6.



Fig. 3.—Another Product Detector.

IDENTIFICATION

In trouble for not identifying every five minutes? Some of us have been lucky and some have received "Please Explain" on this subject. The I.R.C. Department ruling on this is quite specific—you must announce your call sign and the call of the station you are working at the beginning and end of each contact and every five minutes during the contact.

When you are engrossed in an interesting discussion on s.b. or how to grow tomatoes, using VOX, five minutes seems to go past very quickly and it is very easy to slip up on station identification procedure.

Gil VK2RI, of Teneriffe, and a keen sidebander, has come up with a simple timing circuit which will save you from having to QSL an RL. Fig. 4 gives you most of the information you need to build the device.

The relay requires a couple of sets of contacts normally closed so that the 1,000 μ F. capacitor is discharged through the 300 ohm resistor when the relay operates at the end of the time period, adjustable by the one megohm potentiometer. The reason for the 300 ohm resistor is two-fold. One, to keep the contacts closed for long enough to operate your bell, buzzer, tone oscillator, or whatever you wish; and two, to protect the relay contacts from a high instantaneous current surge.

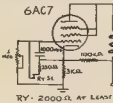


Fig. 4.—Timer.

ACTIVITY

At last a ZLA has shown up on 30 Mc sideband. I believe most of us have been lacking this district on s.b. as well as any more. Kevin ZLAMD has recently come on s.b. on 30 Mc, phasing rig into a 3 element beam. The only gap not filled in this part of the globe is VK3, so what about VK3?

Alan Reid, VK3AHR, of Balwyn, writes me of the hive of activity—sideband wise—in that suburb. The QRX must be very solid indeed when they are all on together as this list is quite impressive. Those are on VK3 2BG, 2BQ, 2BP, 2BT, 3WR, 3AHR, and Alan suspects there may be even more. VK3AHR is the latest using a phasing exciter similar to the C.K.10B.

Alan himself has a 10B driving a 813 in a GSMA circuit, a 3 element beam 33 ft. high and a RC348. A Drake 2A rx will soon replace the RC348.

Not only transmitting Amateurs are interested in s.b. Swi's find listening to sideband stations just as enjoyable. Alan Welford, at Aberlone, in Northern Queensland, has been checking on s.b. conditions on 20 mc and sent me a long list of stations heard. Some of these were ZL1EZ, ZL1K, KB8RI, H51B, ZY1AX, 9M2DB, OA4CV, PY3EJ, UB5FJ, VS47I, VH8L and ZS8RU as well as KA, AR, KX1 and Ws by the score.

If you are one of the late-evening gang, keep a look out for VQ4FO in Nairobi. Walter is interested in Australia as he hopes to live somewhere in this country soon. Before you call VQ4FO, look up the latest cricket scores in the evening paper because not only is Walter a keen 20 mc s.b. operator, but is a cricket fan as well. You will find him on most evenings around 11 o'clock Eastern time above 14,500 Kc.

I wish to thank those of you who have written giving me your support and to those who have called on the air with information and ideas. May I also extend to all of you my best wishes for a Happy Christmas and a prosperous 1961.



The station of Bud Pounsett, VK2AQJ, lives in the kitchen. The tx has s.b. output on the 30/40/70/75 mc bands and the rx is a RC348, modified. The remote v.f.o. can be seen at the left, while the field strength meter monitor is on top of the speaker. Both these items have been subjects of "A.R." articles. A xtal filter is employed to generate the s.b.s.

VHF

(Continued from Page 11)

shifted QTH to Mt. Gambier, 200 miles away, due to business reasons. Unfortunately, Al will not be able to continue the v.h.f. notes relayed by SWI each Sunday morning, and our appreciation is expressed for the good work he has put into the V.h.f. Group generally. Eventually he will be on the air from the "Mount" and new two metre equipment featuring a 417A in the r.f. stage of the rx and a 640 final of the tx has been constructed. An amusing scene is available for the installation of the "Green Trunk" and associated equipment. Al will also be on 8 mc from the new QTH. TS, SBQ.

AMATEUR TV

Commencing on Sunday night, 9th Oct., Amateur TV contact has been made between VK3AUX/TX and VK3ZIB in Brighton. The 288 Mc. band is used for vision and the 50 Mc. band for a normal sound QSO, enabling reports or remarks re vision tests to pass between them. The tx, tx at 2A7K's was described briefly in Sept. '59 "A.R." Ian ZGIR is using a 288 Mc. converter feeding into a tv. set on Channel 1 or 8 for receiving vision. He intends to build a tv. tx soon and it is hoped that a two-way contact can be made.

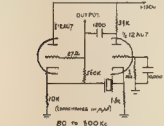


Fig. 1.—Low Freq. Xtal Oscillator.

LOW FREQ XTAL OSCILLATORS

Many of us have had trouble getting those low frequency xtals oscillating. These are those in the range 370 Kc. to 1 Mc. In PT241 holders used in low frequency filter-type sideband generators. Recently I received several of these xtals from Texas Crystals of Fort Myers, Florida, enclosed were their latest catalogue, No. 580. In this catalogue there are several xtal oscillator circuits from low frequency ones (15 Kc.) to overtones types (75 Mc.).

The low frequency circuit of interest to s.b. builders is shown in Fig. 1. This circuit is suitable for frequencies in the range 50 to 800 Kc. For those who wish to install a 100 Kc. marker crystal in a rx, Fig. 2 is that recommended by Texas Crystals for this application. I wish to thank Mr. B. N. Armstrong, Vice-President of the Company, for permission to reprint these circuits.

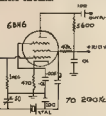


Fig. 2.—Xtal Oscillator.

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TRADE NOTICE

The Sydney Branch Office of R. H. Cunningham Pty. Ltd. and Painton (Australia) Pty. Ltd. has been transferred to 29 Gibbs Street, Chatswood. The telephone number is 40-0218.

HALLICRAFTERS HT37 TRANSMITTER

Now the Ultimate in SSB, CW, AM, at the flick of a switch.

Check these details and compare them with any other unit on the market:

- ★ All modes of operation with one switch.
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- ★ Choice of either sideband on any frequency at the flick of a switch (enabling side talk when in a net).
- ★ Built-in fully regulated power supply.
- ★ Built-in voice operation with extra contacts.
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- ★ Pi-coupled output.
- ★ Temperature compensated, perfectly stable, direct reading V.F.O.
- ★ Variable cal. position for tuning or netting.
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FEEDBACK

COMMENT was made last month regarding the promised I.T.U. Conference report, but this criticism omitted certain facts.

The I.T.U. report has not been published because it is not complete. Until the Frequency Review Committee reach a finding and Parliament have ratified the Geneva findings (and those of the Frequency Review Committee), the final decision regarding Amateur frequency allocations will not be known. This final decision will be reached in mid 1961, and after that date the I.T.U. Conference report, plus the decision of the Australian Government, will be combined and published. The publication of the report was never intended to influence any Body, but was to serve as a historical reference for the coming generation of Amateurs. The full background details to the last I.T.U. Conference were not available to our last delegate and this rendered his task more difficult. So Federal Executive have decided that by publishing a complete summary of the Conference and the final ratification by Parliament it will provide a valuable reference to be used by our delegate who attends the next I.T.U. Conference. You will receive a copy of this report as soon as it is possible to publish the complete story. At this juncture this is not possible, thus the delay in issuing the promised report.

★

If you operate barefoot, then put on your shoes, you are likely to get a hot foot. All very strange to me.

★

English is a versatile language, but it is complicated when the same word has two meanings. Heard two galahs talking about cooking galahs.

★

Noticed that the previous editor of "CQ" (W2NSD) is now publishing a new magazine called "73". Well, never say die.

★

Having written this column the last few months, it is fitting that thanks be given to those who have so kindly sent me bits of gossip from which the brief outlines have been given. At times to hide the identity of those concerned, it has been necessary to be rather vague, but it is impossible to print the full story, to do so would embarrass all concerned. Thus each story must be very brief and not identify the real persons. Though one person did write saying he was not the person referred to in an article, apparently had a slightly guilty conscience.

★

Have been trying to find out what a VK8?

★

A Merry Xmas to all readers, and a sincere hope that the coming year of '61 brings fun and health to you and yours.

TR. CAREY.

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CORRESPONDENCE

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

PLEASE ASSIST QSL BUREAU

Editor "A.R." Dear Sir,
The QSL Bureau, after for VK3 (Ivor Stafford, VK3XB) has drawn my attention to the following matter relating to "outward" QSL cards—a matter which has caused me concern too. We find that some of our Amateurs, when preparing cards for despatch, are loathe to forget four cardinal rules necessary for quick and efficient handling by us. Therefore we ask (through the courtesy of your columns) that all VK Amateurs, when despatching cards, ensure—

- (a) that the call sign of the addressee be clearly printed on the back of the card (top left hand corner);
- (b) All cards be "faced" alike;
- (c) Cards be sorted into countries groups by the sender;
- (d) ALL cards be sorted either right way up or upside down—not half and half.

Observance of these four simple rules will make our task lighter and brighter.

Thanking all in anticipation for co-operation.

—Eric Trebilcock (2BRS/15),
Acting Federal QSL Manager.

PER CAPITA PAYMENTS

Editor "A.R." Dear Sir,
In September "Amateur Radio" appears Federal Executive's 1960 Income and expenditure account, and on the "income" side is the following entry: "Per Capita Payments, £9/6/2." Since the Divisions contributed 2/- per member towards Federal Executive running expenses, this suggests that at the relevant date, the W.I.A. had throughout Australia 96 and one-twelfth members!

These contributions are based on membership as at the 31st day of February each year. The year based on 28th February, 1959, were treated as income of the past year. Then the method of accounting was changed, and those based on 28th February, 1960, will be treated as income of the year just starting.

This, the change-over year, had no income, the year being accounted for as 1959/60/2. Thus their way into Per Capita Account.

—Bob Boase, VK6NI,
W.I.A. Federal Treasurer.

S.W.R. MEASUREMENTS

Editor "A.R." Dear Sir,
With reference to the article on S.W.R. Measurements with a TA-33 Triband Antenna in October issue, I would like to correct an error appearing therein.
Due to my Amateur technical background, I used a V.S.W.R. formula to resolve the S.W.R. where power and not voltage was measured.
The term S.W.R. is apparently accepted to refer to either voltage or current when power is not specifically mentioned.

When both forward and reflected power are known, the S.W.R. is determined from:—

$$\text{S.W.R.} = \frac{\sqrt{\text{Forward Power}} + \sqrt{\text{Reflected Power}}}{\sqrt{\text{Forward Power}} - \sqrt{\text{Reflected Power}}} \text{ plus } 1$$

$$\text{S.W.R.} = \frac{\sqrt{\text{Forward Power}}}{\sqrt{\text{Reflected Power}}} \text{ minus } 1$$

When power is not specifically stated, the formula and graph appearing in the Oct. issue of "A.R." are correct.

One of our readers who are academically minded can correct for transmission line attenuation, etc.

—C. I. Patterson.

STATION LOGS

Editor "A.R." Dear Sir,
I feel compelled to comment on certain remarks made by Mr. C. Jones, VK3CB, with regard to band allocation and c.w. communication.

It would appear that if Mr. Jones and some of his fraternity have their way we can expect to not only have a reduction in frequency allocations, but in types of emission. I do not take this remark too seriously as it is obvious that his views do not represent those of the majority of non-c.w. Amateurs. It is an accepted fact, and not my own view, that c.w. is still the most efficient and expedient method of conveying information from one radio station to another. Surely he would not suggest that automatic Morse at 180 w.p.m. was outdated or inefficient.

The present overcrowded situation in the Amateur bands can easily be resolved. There

is no interference problem in the c.w. portion of our bands, this is due to a number of reasons. Lack of c.w. activity, the use of a narrow bandwidth, and the fact that in general a higher degree of interference can be tolerated without sacrificing efficiency. The same in general terms can be said of single side-band, there is a high degree of intelligibility and a very narrow bandwidth. The present overcrowding in the phone allocation must surely re-affirm that conventional amplitude modulation occupies too much bandwidth and is inefficient and out-dated as a means of communication.

While being willing to concede that certain c.w. allocations are more than adequate, I feel I must refute any idea that c.w. is an outdated and unwanted method of emission which most Amateurs are ready to give away. I am fully equipped for phone operation, but spend 90% of my operating time operating c.w. and certainly enjoy it just as much as when first licensed in 1932, and I am certain my views are shared by many. To a logical mind, the inevitable result of a change-over from conventional amplitude modulation to a.s.b. would be to persuade every other phone operator to do the same, rather than the emotional indignation of the c.w. fraternity who are in no way involved in the scramble for space.

I am convinced that the re-introduction of a compulsory c.w. probationary period, and perhaps the introduction of code proficiency certificates, would go a long way to solving the present overcrowding in our bands, and would certainly improve the operating standard considerably. Surely this is preferable to the hasty removal of a vital communication service.

—Cyril Rylatt, VK3TC.

Editor "A.R." Dear Sir,

This letter is one that my many friends, who use the telephony system of communication, will expect me to write. I am noted for my ability to always rise to an occasion, bite well, and swallow, both sides of the coin. Let me be no exception—rather let it be one of my best "bites," one noted because I too (like Mr. Jones, VK3CB) have my tongue in my cheek for part of the time.

In the VK3 Division I have, so I would be led to believe, an unenviable, yet, despised—job. I call it "the official and to cover and tangled nerve placator's" position. Most others call it various names meaning more or less mediator.

During five years as such I have met men (and one woman) from all classes of society, a typical cross section of the Ham fraternity. With two exceptions, all people approached Morse instruction with a hatred so deep-rooted that even they could not gauge its depth. At the first lesson they glare at that old "squeak box" and grit their teeth, even before they hear its melody. As the exam approaches, nine months later, one or two in each class still have the same murder in their hearts—mentally dreaming of a box gently divided asunder with the business end of an instrument used for tree-felling.

The result—they fail the exam, whilst the comrades-at-arms sail through with flying colors, after having learnt to appreciate the melody, the rhythm and the sheer artistry obtainable through this mode. Unhunted, our stalwarts keep trying, until eventually the examiner gets absolutely sick of the haggard faces and obvious shattered nerves, and passes the poor fellows out of pity.

These tryers have my complete sympathy. If there was some way that I could have put them out of their misery (legally), then I would have done so and so saved them months of heartbreak and thousands of grey hairs. But there is no way. They will never, never, give up, and I shall have to rate and enjoy the Morse. That would be suicide.

From Mr. Roth Jones' remarks in "Amateur Radio," October 1960, it is very obvious that some life has been exacted at the picture painted above. He has himself to blame—ask any psychologist.

Sir, could I tell you of a better way, that others may heed. One of the exceptions that I have mentioned, was a gentleman with an approach that was simple and very obvious when you think about it. I could almost sense him saying to himself, "Here is something new and different that I cannot do. I must learn all about this and see what it entails. This could prove to be interesting and even entertaining."

Because of his approach, that is exactly what it proved to be for him. So much so, that he passed his exam three months ahead of schedule. For me, it was a pleasure to instruct such a one, because his approach made it easy for me to teach him.

Could I point out to all prospective Hams that this is the only sensible way to approach the language of Morse Code.

(Continued on Page 18)

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CORRESPONDENCE

(Continued from Page 17)

With these remarks, I dismiss Mr. Roth Jones' crackpot abolition and re-allocation remarks, and look down the band for a good chat with one of my DX c.w. friends.

—Bruce H. Busenichurt, VK5OR.
P.S.—Please do not get the idea that I am as one-eyed as Mr. Jones, but in the opposite direction. I have made extensive use of phone also, and will continue to do so.—B.H.B.

Editor "A.R." Dear Sir,

I write in reply to the letter of VK1BG in the October "A.R." I am one of the "strange chaps" who works c.w. exclusively, and I am not an old-timer as my call might tend to indicate. I do not "sacrifice all for that one country"—I work anybody anywhere.

One reason that I won't be going on phone is because I don't like a lot of the tripe that I hear, most of it bearing no relation to experimental activities.

Following ZBG's toast "to the abolition of c.w. and the ridding of our ranks, etc. . . ." I would like to add another—Hence to the ridding of our ranks of the narrow minded who see their own hobby-horse as the only one worth riding.

—J. C. Redman, VK3JZ.

Editor "A.R." Dear Sir,

In reply to Roth Jones' (VK1BG) proposed new band frequency allocations for c.w., s.s.b. and a.m., I would agree that eventually c.w. may be superseded as the first means of DX communication, but it is not so yet; so the requirement of Morse Code in the A.O.C.P. is obvious. A good key man reads without undue strain several c.w. stations within 3 or 3 Kc.

To ask the s.m. VK boys to work their phones in the International c.w. section of 14 Mc. will not be received with enthusiasm while the s.s.b. boys have the quieter pastures to themselves.

Neither will the c.w. chaps warm to the inference that we are alien or pestiferous. The c.w. man differs not one whit from the phone man in his search for new countries as the DXCC listings would prove.

—Alan Shawsmith, VK6SS.

Editor "A.R." Dear Sir,

I am amused to read the letter of Roth Jones in the October issue advocating the abolition

of c.w. from the A.O.C.P. exam. and also from 14 Mc. entirely.

If Roth had been a poor c.w. operator I could perhaps understand his attitude, but as he is far from being that, I can only come to the conclusion that he is so entangled with his new toy s.s.b., that he has overlooked the fact that the Amateur is balanced and tolerant of other Amateurs' modes of communication.

When he so graciously offers c.w. the whole 40 Kc. of 14 Mc. and allots the rest of the band to the two phone modes, for the time being, and later on suggests that if it is the wish of the majority (presumably the s.s.b. and phone) the c.w. should be removed from the entire band, he reminds me of a certain gentleman in Europe some 21 years ago.

It is not every c.w. man who chases after the elusive and often non-existent country to the exclusion of his social duties. In this part of the world if I can work VK3 that is DX for me. Occasionally the Yank is to be heard, but not very often, and if Mc. is used as a general band for domestic QSO. The nearest Ham that can be worked is in Brisbane, and then only some times.

If more frequencies are required for s.s.b. what is wrong with the open spaces on 4.5 Mc.? I suppose the answer to that would be general noise. It may interest Roth to know that here there is a high noise level all the year round on all bands from the broadcast down.

In case you should think that I am sore because I work c.w. only, I must say that for some years prior to 1934 I was operating both phone and c.w. Latterly I have been on c.w. exclusively.

I would be interested to hear some other c.w. man on this subject, as everyone is entitled to his opinion in this country.

—Edmond Waddy, VK4GZ.

Editor "A.R." Dear Sir,

It is very pathetic when an Amateur as well known as Roth Jones has to launch an unwarranted attack on a certain section of our members. Let me take his letter point by point. There can be no doubt that s.s.b. is here to stay, and it is very heartening to see the section being entered for in our magazine. As a listener, I have spent considerable time listening to this mode of communication, and can find no criticism, other than a feeling of

frustration when, after an hour of operation, stations don't give their call.

Your condemnation of c.w. communication, Mr. Jones, is utter rot, and not worthy of a gentleman of your standing. We are all entitled to our own hobbies, I prefer to remain an a.w., others prefer v.h.f. s.s.b., a.m. or c.w. They are entitled to a segment of the band, and regardless of your personal feelings on the subject, they shall have it. C.w. may be outmoded in certain fields, but it will always be used in others. Why does a station the size of the U.S.S.R. encourage its club stations in the use of Morse? I would suggest from observation that there are more Iron Curtain stations using this mode of communication than in any other country.

Several other points can be made in favour of c.w. Firstly, it is the easiest and cheapest way to get on the air. There can be no argument about that. Its advantages in heavy going are so well known that I need not enumerate them here, suffice to say that even when things are too tough for the s.s.b. boys, the c.w. men can be heard going strongly. And don't forget the chap who has an impediment of the speech. Yes, Mr. Jones, c.w. must remain, regardless. And please don't forget that the s.s.b. stations who are crowding the top of the band are, in most cases, former a.m. operators who have seen the light. Since these chaps have forsaken their former mode of operation, why should we c.w. chaps have to suffer a cut or complete abolition of our segment to cater for them?

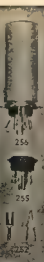
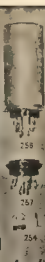
Finally, Mr. Jones, there was a time when you were a renowned c.w. operator; do you mean to tell me that you even now can find no thrill in copying such c.w. "greats" as DL1ZE, KV4AA and so on? Their perfect sending and their flashing speed never fails to make me listen and marvel at just what can be achieved by this mode of operation. As for the reason the Morse exam is held in the A.O.C.P. test, this is a curly one of course, but its inclusion certainly keeps the bands, particularly 40, occupied on a safer level than is all and sundry were permitted to inhabit them. And for a final, final, Mr. Jones, is it not a fact that most of these "strange chaps" take s.s.b. equipment with them to their slabs of rock?

—Don Grantley, W1A-L368.

[More letters on the same subject have been received and will be published next issue.—Ed.]

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Mo. E. AUSTRALIA — W. EUROPE S.B. Mx.

45	0	2	4	6	8	10	12	14	16	18	20	22	24	45
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E. AUSTRALIA — W. EUROPE L.R.

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E. AUSTRALIA — MEDITERRANEAN

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E. AUSTRALIA — N.W. U.S.A.

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E. AUSTRALIA — N.E. U.S.A. S.B.

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E. AUSTRALIA — CENTRAL AMERICA

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E. AUSTRALIA — S. AFRICA

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E. AUSTRALIA — FAR EAST

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W. AUSTRALIA — W. EUROPE

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W. AUSTRALIA — N.E. U.S.A.

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W. AUSTRALIA — S. AFRICA

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W. AUSTRALIA — FAR EAST

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Independent. Rockall Island, will be new DXCC when activated. Wrangle Island, fails to meet DXCC rule of off shore level. DXpedition to San Andres Island is being planned by YN1CAA and YN1TAT from about 800 to 900 kHz. C.w. and s.a.b. operation on 10, 15, 20 and 30 Mc.

It was understood that ex-VK3ANB was to operate from Norfolk Island as VK3ANB. This call sign was apparently used because of a misunderstanding somewhere along the line. The correct call sign is VK3GP. This has been verified by the Radio Branch. At present no reliable signals are available, but will be sent immediately they come in hand, and all these will bear the correct call sign. Irrespective of whether or not the contact was made under this call or the earlier one, the correct call sign of this station is: VK3GP Raymond D. Baly, Cable Station, Norfolk Island. At the moment the bands used are, in the main, 7 and 14 Mc. but other bands will be used as the occasion permits. The policy of this station will be 100 per cent. QSL on receipt of cards from stations worked. (VK3AOM)

UAAU has worked a number of VKs and is very anxious to get their cards. He asked me to pass his wishes along to VKs ZKX, 3VJ, 3MR, 3GV, 4CC, 5AB and 5TC. Frank VK3GL has arranged for the Ionospheric prediction service to be worked on the forecast to VK2WT for inclusion in the Sunday broadcast. Any of the DX boys interested should listen to VK2WT at 11 a.m. Sundays 1946/47.

These broadcasts give the latest information on world-wide DX activities and should not be missed by anyone interested in this phase of our hobby. SV0WZ is very active from Crete. He is prompt with his QSL. Send QSL to Box 964, Athens.

It has been reported that all CR34 (Sao Thome) must shut down by 1st Nov there is no reason given for the action. AC3PN is very active around 1300z.

Bob Murphy, K3CQM, Editor NCDCX, 884 Rorke Way, Palo Alto, California, U.S.A., in a letter to Alan VK3CX, wrote: "One of the reasons I would like to be in a DX club is to track down some of the DX clubs that may exist in your area that put out club bulletins. An editor of the N. Calif DX Club's bulletin 'The Other Side' is anxious to arrange an exchange of bulletins with some club or magazine DX editor in the VK area. Do you know of any? I would like to be in a DX club with individuals who are active DXers and could send me regular DX reports on DX happenings down under, behind the scene news and articles on DX or related subjects. The above is self explanatory; can anyone help?"

60 metres is worth watching, some good contacts have been made. Phil W2HUG worked VK3AKN on c.w. with SS signals both end-to-end like a local contact. He is looking for VKs. His rig is DX100 and the antenna is 44 ft. vertical. (VK3AKN)

ACTIVITIES

George VK3QU at Lithgow operates on 14 Mc only. He uses a pair of 800s with an output of 120 watts and a 100 ft. vertical. L.V.I. is very bad and operating times are limited to 1300 hours to 0630 hours. However, he finds the early morning from 1930 to 2100z is the best time to work. In the past 24 hours were worked in the first 23 days of the month. These included DL, DJ, DM, CKRBT, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L, 2M, 2N, 2O, 2P, 2Q, 2R, 2S, 2T, 2U, 2V, 2W, 2X, 2Y, 2Z, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T, 3U, 3V, 3W, 3X, 3Y, 3Z, 4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H, 4I, 4J, 4K, 4L, 4M, 4N, 4O, 4P, 4Q, 4R, 4S, 4T, 4U, 4V, 4W, 4X, 4Y, 4Z, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 5K, 5L, 5M, 5N, 5O, 5P, 5Q, 5R, 5S, 5T, 5U, 5V, 5W, 5X, 5Y, 5Z, 6A, 6B, 6C, 6D, 6E, 6F, 6G, 6H, 6I, 6J, 6K, 6L, 6M, 6N, 6O, 6P, 6Q, 6R, 6S, 6T, 6U, 6V, 6W, 6X, 6Y, 6Z, 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J, 7K, 7L, 7M, 7N, 7O, 7P, 7Q, 7R, 7S, 7T, 7U, 7V, 7W, 7X, 7Y, 7Z, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8I, 8J, 8K, 8L, 8M, 8N, 8O, 8P, 8Q, 8R, 8S, 8T, 8U, 8V, 8W, 8X, 8Y, 8Z, 9A, 9B, 9C, 9D, 9E, 9F, 9G, 9H, 9I, 9J, 9K, 9L, 9M, 9N, 9O, 9P, 9Q, 9R, 9S, 9T, 9U, 9V, 9W, 9X, 9Y, 9Z, 0A, 0B, 0C, 0D, 0E, 0F, 0G, 0H, 0I, 0J, 0K, 0L, 0M, 0N, 0O, 0P, 0Q, 0R, 0S, 0T, 0U, 0V, 0W, 0X, 0Y, 0Z, 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1N, 1O, 1P, 1Q, 1R, 1S, 1T, 1U, 1V, 1W, 1X, 1Y, 1Z, 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L, 2M, 2N, 2O, 2P, 2Q, 2R, 2S, 2T, 2U, 2V, 2W, 2X, 2Y, 2Z, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T, 3U, 3V, 3W, 3X, 3Y, 3Z, 4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H, 4I, 4J, 4K, 4L, 4M, 4N, 4O, 4P, 4Q, 4R, 4S, 4T, 4U, 4V, 4W, 4X, 4Y, 4Z, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 5K, 5L, 5M, 5N, 5O, 5P, 5Q, 5R, 5S, 5T, 5U, 5V, 5W, 5X, 5Y, 5Z, 6A, 6B, 6C, 6D, 6E, 6F, 6G, 6H, 6I, 6J, 6K, 6L, 6M, 6N, 6O, 6P, 6Q, 6R, 6S, 6T, 6U, 6V, 6W, 6X, 6Y, 6Z, 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J, 7K, 7L, 7M, 7N, 7O, 7P, 7Q, 7R, 7S, 7T, 7U, 7V, 7W, 7X, 7Y, 7Z, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8I, 8J, 8K, 8L, 8M, 8N, 8O, 8P, 8Q, 8R, 8S, 8T, 8U, 8V, 8W, 8X, 8Y, 8Z, 9A, 9B, 9C, 9D, 9E, 9F, 9G, 9H, 9I, 9J, 9K, 9L, 9M, 9N, 9O, 9P, 9Q, 9R, 9S, 9T, 9U, 9V, 9W, 9X, 9Y, 9Z, 0A, 0B, 0C, 0D, 0E, 0F, 0G, 0H, 0I, 0J, 0K, 0L, 0M, 0N, 0O, 0P, 0Q, 0R, 0S, 0T, 0U, 0V, 0W, 0X, 0Y, 0Z, 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1N, 1O, 1P, 1Q, 1R, 1S, 1T, 1U, 1V, 1W, 1X, 1Y, 1Z, 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L, 2M, 2N, 2O, 2P, 2Q, 2R, 2S, 2T, 2U, 2V, 2W, 2X, 2Y, 2Z, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T, 3U, 3V, 3W, 3X, 3Y, 3Z, 4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H, 4I, 4J, 4K, 4L, 4M, 4N, 4O, 4P, 4Q, 4R, 4S, 4T, 4U, 4V, 4W, 4X, 4Y, 4Z, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 5K, 5L, 5M, 5N, 5O, 5P, 5Q, 5R, 5S, 5T, 5U, 5V, 5W, 5X, 5Y, 5Z, 6A, 6B, 6C, 6D, 6E, 6F, 6G, 6H, 6I, 6J, 6K, 6L, 6M, 6N, 6O, 6P, 6Q, 6R, 6S, 6T, 6U, 6V, 6W, 6X, 6Y, 6Z, 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J, 7K, 7L, 7M, 7N, 7O, 7P, 7Q, 7R, 7S, 7T, 7U, 7V, 7W, 7X, 7Y, 7Z, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8I, 8J, 8K, 8L, 8M, 8N, 8O, 8P, 8Q, 8R, 8S, 8T, 8U, 8V, 8W, 8X, 8Y, 8Z, 9A, 9B, 9C, 9D, 9E, 9F, 9G, 9H, 9I, 9J, 9K, 9L, 9M, 9N, 9O, 9P, 9Q, 9R, 9S, 9T, 9U, 9V, 9W, 9X, 9Y, 9Z, 0A, 0B, 0C, 0D, 0E, 0F, 0G, 0H, 0I, 0J, 0K, 0L, 0M, 0N, 0O, 0P, 0Q, 0R, 0S, 0T, 0U, 0V, 0W, 0X, 0Y, 0Z, 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1N, 1O, 1P, 1Q, 1R, 1S, 1T, 1U, 1V, 1W, 1X, 1Y, 1Z, 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L, 2M, 2N, 2O, 2P, 2Q, 2R, 2S, 2T, 2U, 2V, 2W, 2X, 2Y, 2Z, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T, 3U, 3V, 3W, 3X, 3Y, 3Z, 4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H, 4I, 4J, 4K, 4L, 4M, 4N, 4O, 4P, 4Q, 4R, 4S, 4T, 4U, 4V, 4W, 4X, 4Y, 4Z, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 5K, 5L, 5M, 5N, 5O, 5P, 5Q, 5R, 5S, 5T, 5U, 5V, 5W, 5X, 5Y, 5Z, 6A, 6B, 6C, 6D, 6E, 6F, 6G, 6H, 6I, 6J, 6K, 6L, 6M, 6N, 6O, 6P, 6Q, 6R, 6S, 6T, 6U, 6V, 6W, 6X, 6Y, 6Z, 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J, 7K, 7L, 7M, 7N, 7O, 7P, 7Q, 7R, 7S, 7T, 7U, 7V, 7W, 7X, 7Y, 7Z, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8I, 8J, 8K, 8L, 8M, 8N, 8O, 8P, 8Q, 8R, 8S, 8T, 8U, 8V, 8W, 8X, 8Y, 8Z, 9A, 9B, 9C, 9D, 9E, 9F, 9G, 9H, 9I, 9J, 9K, 9L, 9M, 9N, 9O, 9P, 9Q, 9R, 9S, 9T, 9U, 9V, 9W, 9X, 9Y, 9Z, 0A, 0B, 0C, 0D, 0E, 0F, 0G, 0H, 0I, 0J, 0K, 0L, 0M, 0N, 0O, 0P, 0Q, 0R, 0S, 0T, 0U, 0V, 0W, 0X, 0Y, 0Z, 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1N, 1O, 1P, 1Q, 1R, 1S, 1T, 1U, 1V, 1W, 1X, 1Y, 1Z, 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L, 2M, 2N, 2O, 2P, 2Q, 2R, 2S, 2T, 2U, 2V, 2W, 2X, 2Y, 2Z, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T, 3U, 3V, 3W, 3X, 3Y, 3Z, 4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H, 4I, 4J, 4K, 4L, 4M, 4N, 4O, 4P, 4Q, 4R, 4S, 4T, 4U, 4V, 4W, 4X, 4Y, 4Z, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 5K, 5L, 5M, 5N, 5O, 5P, 5Q, 5R, 5S, 5T, 5U, 5V, 5W, 5X, 5Y, 5Z, 6A, 6B, 6C, 6D, 6E, 6F, 6G, 6H, 6I, 6J, 6K, 6L, 6M, 6N, 6O, 6P, 6Q, 6R, 6S, 6T, 6U, 6V, 6W, 6X, 6Y, 6Z, 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J, 7K, 7L, 7M, 7N, 7O, 7P, 7Q, 7R, 7S, 7T, 7U, 7V, 7W, 7X, 7Y, 7Z, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8I, 8J, 8K, 8L, 8M, 8N, 8O, 8P, 8Q, 8R, 8S, 8T, 8U, 8V, 8W, 8X, 8Y, 8Z, 9A, 9B, 9C, 9D, 9E, 9F, 9G, 9H, 9I, 9J, 9K, 9L, 9M, 9N, 9O, 9P, 9Q, 9R, 9S, 9T, 9U, 9V, 9W, 9X, 9Y, 9Z, 0A, 0B, 0C, 0D, 0E, 0F, 0G, 0H, 0I, 0J, 0K, 0L, 0M, 0N, 0O, 0P, 0Q, 0R, 0S, 0T, 0U, 0V, 0W, 0X, 0Y, 0Z, 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1N, 1O, 1P, 1Q, 1R, 1S, 1T, 1U, 1V, 1W, 1X, 1Y, 1Z, 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L, 2M, 2N, 2O, 2P, 2Q, 2R, 2S, 2T, 2U, 2V, 2W, 2X, 2Y, 2Z, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T, 3U, 3V, 3W, 3X, 3Y, 3Z, 4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H, 4I, 4J, 4K, 4L, 4M, 4N, 4O, 4P, 4Q, 4R, 4S, 4T, 4U, 4V, 4W, 4X, 4Y, 4Z, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 5K, 5L, 5M, 5N, 5O, 5P, 5Q, 5R, 5S, 5T, 5U, 5V, 5W, 5X, 5Y, 5Z, 6A, 6B, 6C, 6D, 6E, 6F, 6G, 6H, 6I, 6J, 6K, 6L, 6M, 6N, 6O, 6P, 6Q, 6R, 6S, 6T, 6U, 6V, 6W, 6X, 6Y, 6Z, 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J, 7K, 7L, 7M, 7N, 7O, 7P, 7Q, 7R, 7S, 7T, 7U, 7V, 7W, 7X, 7Y, 7Z, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8I, 8J, 8K, 8L, 8M, 8N, 8O, 8P, 8Q, 8R, 8S, 8T, 8U, 8V, 8W, 8X, 8Y, 8Z, 9A, 9B, 9C, 9D, 9E, 9F, 9G, 9H, 9I, 9J, 9K, 9L, 9M, 9N, 9O, 9P, 9Q, 9R, 9S, 9T, 9U, 9V, 9W, 9X, 9Y, 9Z, 0A, 0B, 0C, 0D, 0E, 0F, 0G, 0H, 0I, 0J, 0K, 0L, 0M, 0N, 0O, 0P, 0Q, 0R, 0S, 0T, 0U, 0V, 0W, 0X, 0Y, 0Z, 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1N, 1O, 1P, 1Q, 1R, 1S, 1T, 1U, 1V, 1W, 1X, 1Y, 1Z, 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L, 2M, 2N, 2O, 2P, 2Q, 2R, 2S, 2T, 2U, 2V, 2W, 2X, 2Y, 2Z, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T, 3U, 3V, 3W, 3X, 3Y, 3Z, 4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H, 4I, 4J, 4K, 4L, 4M, 4N, 4O, 4P, 4Q, 4R, 4S, 4T, 4U, 4V, 4W, 4X, 4Y, 4Z, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 5K, 5L, 5M, 5N, 5O, 5P, 5Q, 5R, 5S, 5T, 5U, 5V, 5W, 5X, 5Y, 5Z, 6A, 6B, 6C, 6D, 6E, 6F, 6G, 6H, 6I, 6J, 6K, 6L, 6M, 6N, 6O, 6P, 6Q, 6R, 6S, 6T, 6U, 6V, 6W, 6X, 6Y, 6Z, 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J, 7K, 7L, 7M, 7N, 7O, 7P, 7Q, 7R, 7S, 7T, 7U, 7V, 7W, 7X, 7Y, 7Z, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8I, 8J, 8K, 8L, 8M, 8N, 8O, 8P, 8Q, 8R, 8S, 8T, 8U, 8V, 8W, 8X, 8Y, 8Z, 9A, 9B, 9C, 9D, 9E, 9F, 9G, 9H, 9I, 9J, 9K, 9L, 9M, 9N, 9O, 9P, 9Q, 9R, 9S, 9T, 9U, 9V, 9W, 9X, 9Y, 9Z, 0A, 0B, 0C, 0D, 0E, 0F, 0G, 0H, 0I, 0J, 0K, 0L, 0M, 0N, 0O, 0P, 0Q, 0R, 0S, 0T, 0U, 0V, 0W, 0X, 0Y, 0Z, 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1N, 1O, 1P, 1Q, 1R, 1S, 1T, 1U, 1V, 1W, 1X, 1Y, 1Z, 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L, 2M, 2N, 2O, 2P, 2Q, 2R, 2S, 2T, 2U, 2V, 2W, 2X, 2Y, 2Z, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T, 3U, 3V, 3W, 3X, 3Y, 3Z, 4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H, 4I, 4J, 4K, 4L, 4M, 4N, 4O, 4P, 4Q, 4R, 4S, 4T, 4U, 4V, 4W, 4X, 4Y, 4Z, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 5K, 5L, 5M, 5N, 5O, 5P, 5Q, 5R, 5S, 5T, 5U, 5V, 5W, 5X, 5Y, 5Z, 6A, 6B, 6C, 6D, 6E, 6F, 6G, 6H, 6I, 6J, 6K, 6L, 6M, 6N, 6O, 6P, 6Q, 6R, 6S, 6T, 6U, 6V, 6W, 6X, 6Y, 6Z, 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J, 7K, 7L, 7M, 7N, 7O, 7P, 7Q, 7R, 7S, 7T, 7U, 7V, 7W, 7X, 7Y, 7Z, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8I, 8J, 8K, 8L, 8M, 8N, 8O, 8P, 8Q, 8R, 8S, 8T, 8U, 8V, 8W, 8X, 8Y, 8Z, 9A, 9B, 9C, 9D, 9E, 9F, 9G, 9H, 9I, 9J, 9K, 9L, 9M, 9N, 9O, 9P, 9Q, 9R, 9S, 9T, 9U, 9V, 9W, 9X, 9Y, 9Z, 0A, 0B, 0C, 0D, 0E, 0F, 0G, 0H, 0I, 0J, 0K, 0L, 0M, 0N, 0O, 0P, 0Q, 0R, 0S, 0T, 0U, 0V, 0W, 0X, 0Y, 0Z, 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1N, 1O, 1P, 1Q, 1R, 1S, 1T, 1U, 1V, 1W, 1X, 1Y, 1Z, 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L, 2M, 2N, 2O, 2P, 2Q, 2R, 2S, 2T, 2U, 2V, 2W, 2X, 2Y, 2Z, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T, 3U, 3V, 3W, 3X, 3Y, 3Z, 4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H, 4I, 4J, 4K, 4L, 4M, 4N, 4O, 4P, 4Q, 4R, 4S, 4T, 4U, 4V, 4W, 4X, 4Y, 4Z, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 5K, 5L, 5M, 5N, 5O, 5P, 5Q, 5R, 5S, 5T, 5U, 5V, 5W, 5X, 5Y, 5Z, 6A, 6B, 6C, 6D, 6E, 6F, 6G, 6H, 6I, 6J, 6K, 6L, 6M, 6N, 6O, 6P, 6Q, 6R, 6S, 6T, 6U, 6V, 6W, 6X, 6Y, 6Z, 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J, 7K, 7L, 7M, 7N, 7O, 7P, 7Q, 7R, 7S, 7T, 7U, 7V, 7W, 7X, 7Y, 7Z, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8I, 8J, 8K, 8L, 8M, 8N, 8O, 8P, 8Q, 8R, 8S, 8T, 8U, 8V, 8W, 8X, 8Y, 8Z, 9A, 9B, 9C, 9D, 9E, 9F, 9G, 9H, 9I, 9J, 9K, 9L, 9M, 9N, 9O, 9P, 9Q, 9R, 9S, 9T, 9U, 9V, 9W, 9X, 9Y, 9Z, 0A, 0B, 0C, 0D, 0E, 0F, 0G, 0H, 0I, 0J, 0K, 0L, 0M, 0N, 0O, 0P, 0Q, 0R, 0S, 0T, 0U, 0V, 0W, 0X, 0Y, 0Z, 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1N, 1O, 1P, 1Q, 1R, 1S, 1T, 1U, 1V, 1W, 1X, 1Y, 1Z, 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L, 2M, 2N, 2O, 2P, 2Q, 2R, 2S, 2T, 2U, 2V, 2W, 2X, 2Y, 2Z, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T, 3U, 3V, 3W, 3X, 3Y, 3Z, 4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H, 4I, 4J, 4K, 4L, 4M, 4N, 4O, 4P, 4Q, 4R, 4S, 4T, 4U, 4V, 4W, 4X, 4Y, 4Z, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 5K, 5L, 5M, 5N, 5O, 5P, 5Q, 5R, 5S, 5T, 5U, 5V, 5W, 5X, 5Y, 5Z, 6A, 6B, 6C, 6D, 6E, 6F, 6G, 6H, 6I, 6J, 6K, 6L, 6M, 6N, 6O, 6P, 6Q, 6R, 6S, 6T, 6U, 6V, 6W, 6X, 6Y, 6Z, 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J, 7K, 7L, 7M, 7N, 7O, 7P, 7Q, 7R, 7S, 7T, 7U, 7V, 7W, 7X, 7Y, 7Z, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8I, 8J, 8K, 8L, 8M, 8N, 8O, 8P, 8Q, 8R, 8S, 8T, 8U, 8V, 8W, 8X, 8Y, 8Z, 9A, 9B, 9C, 9D, 9E, 9F, 9G, 9H, 9I, 9J, 9K, 9L, 9M, 9N, 9O, 9P, 9Q, 9R, 9S, 9T, 9U, 9V, 9W, 9X, 9Y, 9Z, 0A, 0B, 0C, 0D, 0E, 0F, 0G, 0H, 0I, 0J, 0K, 0L, 0M, 0N, 0O, 0P, 0Q, 0R, 0S, 0T, 0U, 0V, 0W, 0X, 0Y, 0Z, 1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I, 1J, 1K, 1L, 1M, 1N, 1O, 1P, 1Q, 1R, 1S, 1T, 1U, 1V, 1W, 1X, 1Y, 1Z, 2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2I, 2J, 2K, 2L, 2M, 2N, 2O, 2P, 2Q, 2R, 2S, 2T, 2U, 2V, 2W, 2X, 2Y, 2Z, 3A, 3B, 3C, 3D, 3E, 3F, 3G, 3H, 3I, 3J, 3K, 3L, 3M, 3N, 3O, 3P, 3Q, 3R, 3S, 3T, 3U, 3V, 3W, 3X, 3Y, 3Z, 4A, 4B, 4C, 4D, 4E, 4F, 4G, 4H, 4I, 4J, 4K, 4L, 4M, 4N, 4O, 4P, 4Q, 4R, 4S, 4T, 4U, 4V, 4W, 4X, 4Y, 4Z, 5A, 5B, 5C, 5D, 5E, 5F, 5G, 5H, 5I, 5J, 5K, 5L, 5M, 5N, 5O, 5P, 5Q, 5R, 5S, 5T, 5U, 5V, 5W, 5X, 5Y, 5Z, 6A, 6B, 6C, 6D, 6E, 6F, 6G, 6H, 6I, 6J, 6K, 6L, 6M, 6N, 6O, 6P, 6Q, 6R, 6S, 6T, 6U, 6V, 6W, 6X, 6Y, 6Z, 7A, 7B, 7C, 7D, 7E, 7F, 7G, 7H, 7I, 7J, 7K, 7L, 7M, 7N, 7O, 7P, 7Q, 7R, 7S, 7T, 7U, 7V, 7W, 7X, 7Y, 7Z, 8A, 8B, 8C, 8D, 8E, 8F, 8G, 8H, 8I, 8J, 8K, 8L, 8M, 8N, 8O, 8P, 8Q, 8R, 8S, 8T, 8U, 8V, 8W, 8X, 8Y, 8Z, 9A, 9B, 9C, 9D, 9E, 9F, 9G, 9H, 9I, 9J, 9K, 9L, 9M, 9N, 9O, 9P, 9Q, 9R, 9S, 9T, 9U, 9V, 9W, 9X,

NOTES

FEDERAL

NEW ADDRESS FOR V.E.R.O.N.

V.E.R.O.N. (Vereniging Voor Experimenteel Radio Onderzoek in Nederland), the Society in Holland, requests that all correspondence, magazines, certificates, etc., only be sent to Postbox 5, Amsterdam-C, The Netherlands.

The official QSL Bureau address for the Netherlands is still the same as has been for the last 30 years: Postbox 400, Rotterdam, The Netherlands.

OPPORTUNITY

Here is an opportunity to obtain "Call Book Magazine" (the world directory of Amateurs) at about one-third normal price. Federal Executive has for sale several recent back numbers, most in near-new condition. Price including postage is \$1, and the following are available:—

Spring 1960 (U.S.A. section only). Winter 1959/60 (U.S.A. section only). Fall 1959 (world-wide). Spring 1958 (world-wide). Apply Bob Boase, 85a Franklin Street, Melbourne, Vic.

NEW SOUTH WALES

The mid-month evening at Atchison St. was well attended by members eager to be indoctrinated into the application of transistors in outboard converters. Sid ZSC described and demonstrated a transistorised crystal locked converter which was built into an AR7 coil box. Seems to me that mass miniaturisation of the gainful popularity in the Amateur service and it is indeed fine business to have exponents in the art of miniaturisation come along and show us how. Thank you Sid for an interesting evening.

"A Review of Single Sideband Techniques" was the title of the lecture delivered by Max ZMP at the October general meeting. The meeting, which was conducted at Science House, was well attended. The lecturer outlined the development of s.b. from the days of Arnold's experiments in 1915 up to the present day. After explaining block diagrams of typical commercial s.a.b. tr's and tr's, Max made suggestions regarding the design of Amateur s.a.b. rigs. The vote of thanks was moved by a well known sidebander, Leo ZAC.

The Blue Mountains Section Field Day was conducted on 30th October, the report of which appears in other columns of the magazine. See you next month.

"Ode to a Billiard Cue." "A cheer for Shannon ZEL. Our mate from Pheny bay. And though he curses it like hell, The t.v.'s here to stay His low pass after's on the blink, His buffer's radiating, And sums all does in pen and ink Say, 'feeders radiating'. And still the field strength reads a lot, A millivolt too high, He'll have to cut it down somewhat Or else interview T.L. 'Speak louder Shannon,' say the spurs, 'Your modulation's down' But wist with neighbours and the rest, He wears a worried frown. But wait, Our Willie's found what's wrong. The speakers come at last. Just turn the knob round to the stop, And give them all a blast. So if one night you're sitting there and suddenly, Kerplop. A cherry face lights up the screen, It's Shannon from the swamp."

BLUE MOUNTAINS FIELD DAY

The Lawson Swimming Pool grounds was the venue for the Blue Mountains Section's Annual Field Day held on October 30. Over 100 persons attended and Amateur registering in the event. The following were present: VKA 2BARK, 3EZ, 2AWV, 2ZAH, 2ART, 2QA, 2DK, 2RM, 2ASZ, 2WJ, 3PK, 2AJQ, 2ACF, 2QO, 2ZAV, 2ZFB, 2ALJ, 2RU, 2ZT, 2ZTM, 2AZC, 2K, 2ZDK, 2AG, 2AGN, 2YB, 2YD, 2ED, 2ZFW, 2AVK, 2ZKP, 2ZPC, 2SW, 2ZEL, 2APQ, 2VL, 2MP and 2CZ.

FEDERAL QSL BUREAU

I am always at a loss to understand why QSL cards do not interest ALL Amateurs, because without QSL cards, Amateur Radio is not just Amateur Radio. In all sincerity, I do appeal to that DX-minded operator of certain three-letter VK3 call to change existing policy, collect his cards from the VK3 Bureau, and to save we QSL officers much unnecessary work in re-handling his many uncollected cards.

Ken Bale, ELAA, recently forwarded five choice QSL cards to this Bureau and requested that the five VK operators concerned ensure that their cards are sent to Ken, whose mailing address for anyone interested is: Philo, C/o, Le Toumeur de Liberia Ltd., Robertsfield, Liberia, West Africa.

From reports received, the ship carrying our Federal QSL cards to this Bureau and requesting that the world trip had to "go on a diversion course" in the Caribbean to escape hurricane "Dennis". They ended up with anchor down for nearly a whole day in the vicinity of Cuba, riding on very high waves.

When you next contact CRIZ try and put yourself in his position. Why? Because Rutliff is located on the Island where for three years he has to endure living with no movies, no dance parties, no power and light except at night, no garden because of too much sand, and knowledge that Ibo Island, remote as it is, won't be a new one for the DXCC map! CRIZ QSLs 100 per cent. all contacts and reports.

I would cards for VK3 should now be sent to Ted Fuller, VK3FT, Box 41, Darwin, Northern Territory, Australia. The VK3 Bureau will continue as outboard bureau for VK3 members.

—Eric Trebilcock, HERS-195, Acting Manager.

FEDERAL AWARDS

Since 4/7/60, W.A.V.K.C.A. Certificates have been awarded as under:—

- No. 134 ZLHAH—H. C. Miller
- " 135 WELM—Tom Welling
- " 136 WCHY—Glen Baker
- " 137 KPMY—Joseph Gonzales
- " 138 WPUVR—Jim Smith
- " 139 YUTMD—Dady E. Major
- " 140 WDMY—Dick McKercher
- " 141 VESGIO—Harry D. Gray

—Alf L. Klesick, VK3KB, Awards Manager.

SILENT KEY

It is with deep regret that we record the passing of—

VK5TW—Tom Welling.

A photograph taken at the Hunter Branch (WLA) Dinner, 1/10/60. Left to right: Dave Duff, VK3EO, Federal Councillor; Gordon Sutherland, Branch President; Lionel Swain, VK3CB, Branch President; Wal Salmon, VK3SA, Metropolitan Police Superintendent; Bill Lewis, VK3BY, Divisional President; George Riley, P.M.G. N.S.W. Superintendent of Radio; Max Hall, VK3ZS, Federal President; Allan Fairhall, VK3KB, M.H.R.

SHERRY SHANON

As in past years the monthly meeting after the October festivities was poorly attended. By courtesy of John Trail, and after Varley SSF entertained us with the latest in tape records, we were able to enjoy some interesting films. In the absence of President Lionel, who was away attending ZHC's daughter's wedding, Vice-Varley took the chair and allowed Secretary Gordon Sutherland read the minutes to the following: JAZZ, 2ZAF, 2RJ, ZEL, 2AKX, 2AYL, 2AEZ, 2AQ, FYD, Mann, Mellichamel, Temple and Bob Blyth, the latter being introduced to the mob by JAKX as being the latest associate. It was decided to hold the final meeting of the year as of the usual Xmas variety—hope there will be sausage rolls available as in the absence of the Sydney boys I might get one this time —JAPQ and 2ATM please copy.

During last month the President and 2AWK were assisted by 2RU, 2AYL and 2AQK. Keith and his hambugers are progressing very well and soon hope to be applying for a station licence. At present they are building power supplies and receiver and as the 'burgers are so good, hope to be applying for a station licence. At present they are building power supplies and receiver and as the 'burgers are so good, hope to be applying for a station licence.

Did you hear the story about a foreigner who crept across the northern border and tarried awhile at one ZEB, and whilst Eddie was wasting his time looking at t.v. the foreigner, let us call him Frank, crept outside and plugged in a g.d.o. No need to explain what happened next! However I can go one better than that. Bill ZEL has been causing t.v. with one of those cheap buzzers whilst teaching his nephew the code. The aforesaid nephew's father could copy the code on his t.v. set two doors away and later that night whilst ZEL was showing me the set-up, he pressed the key and all the lights in Phenella Bay went out—how it must be powerful.

Well chaps, don't forget the Xmas meeting on 9th Dec. and with the editor's permission I will fill in my prepaid space with an Odour by an anon. author called Keith.

The weather was reasonable and despite an empty pool and some bus problems, the day was very successful. Actually the empty pool was a blessing for the XYLs with youngsters, they did not have to worry about their offspring falling in water.

The main features of the day were the field events and running trial to form Dave 2AWZ won all three events—the 144 Mc. hidden tx, the 144 Mc. scramble, and the 1 Mc. scramble. A truly fine performance. Bob 2ASZ acted as time while Wal 2MZ set up his equipment for the blindfold hunt. A disposals sale attracted the usual bargain seekers and a lot of equipment and money changed hands.

Winners of the prizes for the various events were as follows: blindfold hunt, Allan 2ZFW, gent's, 1st Mrs. 2AGN, and Mrs. 2ADF, ladies. Gent's numbers, 1st Keith 2AEK, and New 2ED, 3rd Bob 2ASZ. Ladies' numbers, 1st Mrs. 2EX,

CQ VK2, CQ VK2, CQ VK2!

Plan your holidays to include the

N.S.W. DIVISION'S

ANNUAL

CONVENTION

on

27th, 28th, 29th JANUARY '61

★

Programme:—

- Jan. 27: General Meeting.
- Jan. 28: Convention at Durai.
- Jan. 29: Mobile Rally and Field Day.

Watch the Bulletin for further details.

73 de VK3MFP, Chairman.

Convention Committee.

2nd Mrs. JZVL, 3rd Mrs. ZWV, 144 Mc. hidden tx, 1st ZAWZ, and John ZZAV. 7 Mc. scramble, 1st ZAWZ, 2nd Geoff ZCZ, 3rd Gorbam ZAGN, 144 Mc. scramble, 1st Dave ZAZ, 2nd Dick ZZCF.

At the conclusion of the day the prizes were presented by the Section President, Keith JABK. The success of the day was the result of the work of a number of local Amateurs including JABK, ZQA, ZAVK, ZHZ, ZNK, ZHRM, ZCZ, Alice ZAZ, and Associate Les Stall.

CENTRAL COAST ZONE

Operation of the Gosford Radio Club station, VKIAFY at the Gosford High School Science Exhibition on October 13 was very successful. Geoff's 50w. tx was used into a long wire antenna. Conditions on 40 during the day were excellent, but at night 80 mwx was too noisy, 37 contacts were made including two old Gosfordians, John SAVY and Rex ZYA.

A 2 mwx link for reception purposes over half a mile distance proved very useful, as the conditions at the showgrounds were a bit noisy. Another item at the exhibition was a closed circuit tv. system working into Channel 6 on three r.c.s. At one stage the camera was focused on the radio operator at the other end of the hall using telephoto lens. The camera, with amplifier valves was about the size of a home movie camera and the definition very good.

Work continued with slow Morse transmissions for beginners. Trevor is building a new v.f.o., also a zero-MHz 907 modulator. Frank ZAZ (new call) is making plate mod. for Command ZCZ. Alice ZAZ is working on a 1000 Hz better signal than the 133 Aleci Reg ZAI is still making frequent trips to Riverina and VKCZ, using his slave-bus tx, r.c.s. controlled on 7 Mc. Fred ZALA is building a 3 mwx converter for mobile use. ZAIL has had good results on 40 with his Geiswe tx. Bob ZIN is heard on 40 from the Entrance. He is now keeping fairly well and will help to re-commence A.O.C.F. classes in the Gosford Club.

A recent visit of note by members was to see Paul Schaeffer, VKIAIX/WKWW, at the Hotel Florida, Terrigal. He had some interesting automotive programming equipment using an elaborate record player and several tape recorders, also push buttons. Party included ZEH, ZAF, ZALA, ZMV, ZAIL, ZAI and associate John Trewhella. Paul has since returned to W-land but we may see him again next year.

Your scriber RON has had success with g.s. AGT as you drive for 813 in s.b. tx. This makes three linear stages! I think one should stop here.

BOYS' RADIO CLUB, VKIAIQ

Lately we've got the habit of checking to see if the aerial is still up, day-time contacts and so we're on 40 mwx. Next year we hope to raise a real antenna farm to make things easier—parts are on hand for a 30 mwx three element beam.

Club members were recently welcomed in the shack of Kev ZABV, where they saw a 40 mwx rig complete with day-time contacts and appearance. A souvenir of the visit was a very fine speaker cabinet for the club station and some spare parts for the boys.

Allen took a look at a few boys for a run one dinner hour, and they were able to exchange comments with the club station during the time.

Mike has just finished an extensive project to celebrate the arrival of a new soldering iron—a dual wave set and audio osc. for c.w.

practice. John is making a translator rx when he gets the translators.

With a bit of luck, all the club members will have been up to 17W by the time this is printed; if you have any QSLs left, you must have missed us! Please note, the club postal address is Box 77, Telaraham, several very important letters have gone astray, and also some small packages addressed to the School, the new box should assure safety.

A very Happy Christmas from all club members to every Amateur and S.w.s! 73, ZATQ.

VICTORIA

The Maldon Convention was both a great success and at the same time a disappointment. From the point of view of those few who attended, it was a very good Convention—they all had a very good time. Col ZFO and his helpers did a wonderful job in organising the show, but it must have been a disappointment that so few attended.

The dinner was beautifully prepared and was described as "sumptuous." The President of the Shire of Maldon was present (the dinner was held in the Shire Hall) and he confessed an early interest in radio himself!

The President of the Victorian Division of the W.I.A., David ZADW and Secretary, Michael ZLEO, reported on the year's activity, and much discussion took place regarding the question of liaison between zones and Divisional H.Q. It was suggested that zones be represented on Council, but as this was considered impractical, the President of the Council sent a copy of minutes to the zones after each meeting.

The ticklish question of Z calls using c.w., etc. was referred to Council.

On Sunday the boys went over the "Golden Age" gold mine—nobody found gold, but all had a very interesting time. The 3 mwx four was Len ZLN, and ZADW and ZCZJ eventually caught him. After a very fine business lunch, the 80 mwx tx hunt was held. Bob ZAI, Len ZLN and the ZADW-ZEO team spent a pleasant time scrambling over Mt. Terrangone searching for a very well-hidden tx. (Jack was paddling around with his tape recorder most of the time, which accounts for those strange things heard over recent broadcasts.)

After afternoon tea, all went home—having enjoyed themselves thoroughly.

The town of Maldon was "thoroughly prepared" for this invasion of "Hans." It is rumoured that they were surprised that Hans look almost like human!

WESTERN ZONE

Merv, ZAFQ, Horsham, has recently returned from his annual leave which he, ZYL and family spent in VKS land. While away, Merv was able to join in our zone hook-up with the 1000 Hz beam.

Gordon ZNX, of Warracknabeal, is busy rebuilding his shack, so guess we will be hearing him more often in the future.

Believe Chas, ZVIB of Gilbert Islands, has become interested in s.b. and is working on this type of rig at present. We expect Chas back with these plans next year.

Gordon ZGW, of Rainbow, is preparing for our Zone Convention which will be held there on Saturday, 3rd December.

SOUTH WESTERN ZONE

The big event of the month, the Jamboree-on-the-Air, has passed and the dust is settled.

What a wonderful event it was for both parties. At least for the average Amateur, many of the facets of Scouting have been unfolded before him. Some of the many mysteries of Amateur Radio have, perhaps partly, been explained and many more left to offer a challenge. What a field there is for the boys for recruitment to our ranks. Of 40 VK3 stations who were operating, 16 were members of the Zone; a pretty sizeable proportion. They represented a cross-section of Scouts and Guides. One heroic effort was the contact between ZKE with the Camarut boys and ZAKN on 7 Mc, of course. Congrats to the Camarut group!

The success of this show is due entirely to John ZAGD and his deputy Lin ZAKU, to whom we must hand a large sized bouquet. Conditions were not good but in spite of this some DX contacts were made. While on the subject of Scouts, this station may contact with VKIAAH on the 30 mwx band. VKIAAH is run by the Ashgrove Scout Group in Brisbane and is believed to be the first Scout station in Australia. The operator is Bob VK4IB.

The W.I.C.E.N. practices have continued with the ranks thinning a little due no doubt to duties. The W.I.C.E.N. operating procedure has been posted to each member, we hope it will be earnestly studied and applied. So far, though, little application has been in the way of making a good contact with VKIAAH on the 30 mwx band. VKIAAH is run by the Ashgrove Scout Group in Brisbane and is believed to be the first Scout station in Australia. The operator is Bob VK4IB.

Tests have been carried out on the 140 mwx band by Jim ZABT and Kevin ZAKR with some success. It is hoped that some of the band will require some better netting than has been the case lately or the network will fit in the band. Kials probably will be required and what frequency? Let's have our thoughts on this please.

News is scarce this month, due to ZRL, this month, and ZABY, 30 days. ZABY, recently under the professional eye of Kel ZNA, took the ATRIB with him and made a few contacts in spite of the awful noise. Brian ZNL is working on a 1000 Hz beam, very simply. He reports that Kel, whose professional duties have kept him inactive, has shown renewed interest in radio lately—with the lamp there also was no stranger to kilocycles and things, for he was Sister Judith, of whose brother Eric ZANZ, a long time no-se, was ZAKR. Eric ZANZ is still to be found on 40 mwx when 15 mwx is dead. Quite a team those two when it comes to antennae. Eric doesn't mind making a few contacts in the sky hook and 80' 'em up. Bill ZKE has been troubled a little with aquatic life in the golden fleece as many here have. John ZAGD and Don ZABT, who both have been in the Zone, has news of Leigh ZIN from time to time and the latest report to hand is most encouraging. Leigh has been in the Zone from the cards which his friends have sent. Just a thought chaps, are you still sending one occasionally or did the first one do the job. He will be there quite a while yet.

Well chaps, must get on to the next month's notes now as the Editor is waving the big hand and saying "good night" to his boys. From the Zone, we wish you all a very Merry Christmas and plenty of l.b. QSOs during the holidays.

EASTERN ZONE

"Spring is sprung."

The grass is ris,

We wonder where

6 mcs is.

At least that was the story until Nov. 6 when the VKs were in all day until about 2300K. Approximately twelve stations were audible in East Gippsland. A VK3 was also heard calling VK4 stations.

Peter ZZDP reported hearing ZZDI on back-slash ZEDZ on 40 mwx. He gave Jack ZABT no success. The QRM was probably as thick as pea soup in Melbourne. The only other opening was on 28th Oct. when ZZDP had work with ZGIV at 1800K.

2 mwx continues to provide some interest for the regulars. ZFO was worked by nearly all zone stations on 28th Nov. evening and splendid co-operation between stations was mainly responsible. About the only one who failed to make the grade was myself. My converter failed to co-operate. ZZA and ZZB reported contacts with ZANQ at Warrnambool and ZZAQ has also logged contacts with ZAGV and ZZAV. ZBW was heard on several occasions at good strength.

Two new stations are now in Balraeade, but not yet active. ZANU and ZEDM are busy building equipment and both hope to be on the air by Xmas.

ZDY has been staggering up and down masts with a 10 mwx beam over his shoulder. Let's hope he puts as much v.f. energy into it as he



The Gosford Radio Club display at the Gosford High School Science Exhibition held on 13th Oct. All bands were worked and many stations contacted. Standing left to right: Lindsay RON, Major ZIN (President), Associate Geoff ZAF, Geoff ZAIL. Front row left to right: Associate Peter Day, Les ZAKL, Roy Elliott (2x call), Fred ZALA, John ZND, Reg ZAI (Secretary), Ern ZELI, Bob ZIN.

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10 Watts. Class B 6N7.

Sec. 1: 4,200 and 8,000 ohms.

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With Impedance Chart.

Primary: 2,000 to 10,000 ohms A.-A.

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Reversible mounting case with turret
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was had by all and at the same time opportunity was taken to say bon voyage to Ken, who, if rumour is to be believed, was at times a little bit of a tease at the thought of leaving such a cheery bunch of Elizabethians.

The following evening there was a general meeting of the club and quite a few of those present at the "shindig" were conspicuous by their absence. Ben SEP entertained those present with some movie-type pictures taken in many places including one from Alice Springs when SEP/S was in residence recently. The club is increasing in popularity and its award, The Elizabethan Award, has been sent out to 26 applications so far, and more to come.

Clive SPE is heard squawking away during his periods at home and this duck-talk is really something that everyone in Elizabeth disconnects their antenna and r.f. stage, and even sometimes their rulers too, in order to listen. He is also busy making a prototype mobile transceiver which is going into production as a club project. Ben SEP is passing through a trouble-some time with his four-wheel rig, understanding that it is valve trouble and who won't fit. Ian SQX is in the throes of rebuilding his rig to ensure that he has a little privacy in this world. It appears that the local garage-box addicts are not only bearing him, but are reputed as seeing him as well. My sincere sympathies OM.

John SEV is regularly heard from Woomera via SWC on Monday evenings. Strange as it may seem, he is having considerable difficulty in obtaining the Elizabethan Award as he is only home at Elizabeth during week-ends, however there is no doubt that he will get it eventually. Woomera SWC, incidentally, is quite active with Elizabethian operators these days; recently SEV, SES, SPE and SQX were contacted from there. The secretary of the Woomera Radio Club, Bill Jamieson, must be hard put to keep them all in order. Harry SEU is often heard on 11 Mc., but that back garden of his has taken quite a good bit of time that would have gone into Amateur Radio. Robbie SPF was heard a number of times on 14 Mc., but my espionage agent tells me that he has shot through to G-land for a while. Steve SEA is slowly getting ready for a grand debut on the bands, which according to all reports should not be long now. At the moment however, he just has the doubtful rating of being classed as "coming QRM on the band".

Tubby ENO is quite a busy little bee on Monday nights with the club session on 7 Mc. The call sign is SLZ and with his harmonic, Jeff SNQ, at times hovering in the background, the call signs often get mixed up a trifle. My spies inform me that a strange structure is growing in Tubby's back garden, and they say that if it grows into what they think it is, then the satellites had better beware Duck your head as you go past!

Incidentally, the phonetic alphabet for these two characters, ENO and SNQ, is 3 Never Off and 3 Never Quiet. How true, how true!

I recently referred to Col SKY and a publication "Splatter", which he often refers to in his contacts with John SDJ. To satisfy my curiosity, and also to make my fee red, I received this week from Col several copies of the said "Splatter", and to my mortification and embarrassment it turned out to be the official publication of the Adelaide University Radio Club. Donning my sackcloth and ashes, I sat back and read the copies right to the end and can say without fear of contradiction that they made very interesting reading, being technical without being too technical, and carrying an editorial sense of humour which has to be read to be appreciated. The letter enclosed with the copies informed me that I would be put on the mailing list forthwith, and I look forward to receiving each copy. Many thanks Col, and my humblest apologies for my ignorance. However, now that I know that you are the Editor of the excellent publication, a certain coolness must now develop between us because I am allergic to Editors. I did intend to consult you the next time that I had a turnmy ache, but not now, because after the treatment that I have received from editors, past and present, I will settle for my turnmy ache.

Ron SVH is almost ready to go on the air, although at the moment he is having a little b.f.o. trouble, but with the ready assistance always available from the boys at the Mount, it should not take long to straighten out.

Claude SCH has been on one of his many holidays in the land of the Wise Men from the East (unless I have a bad memory, this joker has about ten or so holidays every year) and has returned home with the usual pan-technician full of new gear, etc. I don't know what he does with it all. Stewart SMS has launched his new rx, which by the way is so good that only the best v.f.o.'s show no sign

of drift. No doubt he will be digging some of the rarer DX out of the QRM from now on, although it will be no good my trying to work him with the state of my v.f.o., he would only catch me as I tore up and down the band.

Leo SGJ has been in Adelaide doing a course on transistors, and from this the local boys are forecasting a lecture at the meeting night in the near future. He has returned to the Mount again, and as my spy sashy puts it, none the worse for the smog-laden air. What can he mean by that crack? David SAW has been fairly active on all bands from 80 through to 1 mc. He had the misfortune to burn out a power transformer in his 40 mx tx, but should be soon OK. Pete SPF/M, although not usually included in the G.S. notes, has been operating portable from that locality over a week-end recently and the rig behaved itself to everybody's satisfaction, particularly Pete's. Apparently he enjoyed his visit very much, and all are hoping that he can make a return trip soon.

Al SECR is the latest arrival in Mount Gambier, and the boys extend a hearty welcome to him. This new blood could mean a renewal of v.h.f. activity in the area, which from all accounts would be very welcome. Johnny SKO passed through the Mount this month on a business holiday trip. Have not seen much of him lately, I even do not know if he is active on his beloved 3.5 Mc., but this I do know, I will bet that the boys at the Mount heard all about the merits of that band as against any other.

My co-conspirator at the Buy-and-Sell Nights, Norm Colman, is at the time of writing, an inmate of the Adelaide Hospital after a nasty fall down a trapdoor at his work, into a cellar. He finished up with a couple of burst ribs, a cracked collarbone, shock and concussion. I met his wife who was coming from the hospital on the second day and she told me that he was as well as could be expected, but was not anxious to talk and would probably be in the hospital for several days. Bad luck Norm, hope you will soon be up and about.

The letter to the editor in last month's "AR" regarding the abolition of the signature of Roth SBQ stirred up quite a hornets nest in VKS, although Roth has stirred up such nests before. Knowing Roth, how-

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ever. I think that he shins up such notes in all good faith. Nevertheless it is considered in VK3 that in these troubled times for Amateur Radio, it is no time to consider any subject at all, and especially the abolition of any one phase of the hobby in favour of another phase. After all, I don't see the necessity for editors, but I wouldn't have the hide to suggest that they be abolished on so flimsy an objection. We must never forget that one man's poison is another man's meat, and that there is room for everybody. Once we forget this, we will soon be half raising one hand and saying, "Heil Hitler".

Bob PRO, ex-SRG, by the time that these notes are being read, always assuming that someone has the opportunity to have it, —Ed.), will have returned to VK3 and his recent trip to Adelaide only a pleasant memory. It was good to see him again, it only at two general meetings, and we wish him well for the future and will be on the lookout for him on the bands. Believe it or not, I never thought that the day would come when I would write in such complimentary terms about an R.I., but you can't shut your eyes to facts, and probably age has mellowed my outlook. I am not of subject matter. I don't don't look like the agree that they did twenty years ago! That should keep me sweet for another twenty years.

Well, well, well, I thought that I had wrapped it up for this month, but it has suddenly struck me that this month's notes will appear in the next issue, although it is now October. I don't usually write too many notes each month, in fact the editor, may his twelve months be long, has asked me to go on my back to write more, ahem, but I am sure he will allow me a little space to say on behalf of the VK3 Division and the Council, to Merry Mac, all Divisions and all members, and may Father Xmas bring you all that you desire yourself, and with plenty of space. Let's hope he brings the Editor's message, and that he has cold and heat of his, so that a poor and struggling writer like myself can look forward to a little more space in the coming year. —Ed.) (Will be pleased to publish both of them.—Ed.)

WESTERN AUSTRALIA

Well chaps here we are back again after two months' silence, due to being mowed under with work (that's the curse of the drinking blazer), and not receiving any news from any VKs as yet and the information is very hard to accumulate by myself, so what about it? I am looking for any and every rig, that special contact or anything else of interest to other VKs.

VKs GCL, GMP and GEW decided to spend a few days driving Carnarvon and sawanore, GQM last month and thanks to Noel I have a few insights of their trip. They worked a couple of most of the way, and when in the Murchison area they spotted a fox which Noel GMP was about to shoot, when John GEW, who was QSOing at the time, shouted "Get me a ticket for a fox, I'll give you a fox for the voice of GEW for he highlighted it out of the way before a shot could be fired.

On arrival at Carnarvon a red vehicle with old letters on the doors pulled up behind their wagon, the driver approached Noel GMP and Noel told him he was either GCL or GMP. Noel was about to deny all knowledge of the said call signs, but the driver did not look too official and confessed to his call sign, I think Noel must have lost one page of his letter because he did not say how long he had his ticket for or give any further information on this contact.

Noel then goes on to say that they visited the "Mallee" 20 miles from Carnarvon, and Ian GCL found something which can blow harder than he, they were blowing water some 50 feet into the air on a relatively calm day. Noel GMP was driving along Quade Road, GCL could not find anybody on the band to work mobile, so he put his head out the window and saw a flock of white-bellied swans. He did it so well that GMP took some time to realise it was GCL who was making the cow noises (C. Moo, C. Moo, C. Moo, de VKGCL).

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Once again the cheerful voice of Pete HPTCC aboard the tanker "Alvina" was heard on 30 m. It is six months since last we heard from Pete, he has been back to G-land and is now on his way to G-land from the Persian Gulf and then back again.

Well at last we have the slow Morse under way with four starters, Clem 6CW, Ray 6WU, Joe 6CO, and George truly 6PZ. This led me to have a 2 1/2 hours QSO on Sunday night as great interest was shown and lots of suggestions were given into the melting pot, and so I think we have come up with ideas to make a good session, which is to be on 80 m every Tuesday, Thursday and Sunday, 2500 to 3100 hours and split up as follows: First 20 minutes, 6 to 8 words a minute, then read text, next 20 min. 5 w.p.m., increasing to about 10 w.p.m., then read text, then finish off with about 10 w.p.m. The sessions will continue like this till after Xmas, after which we may be able to increase the number of nights. So let's have your ideas, but make them constructive, please.

It is nice to hear Jack 8BU back on the air again after his bout in hospital. He is still unable to get to the normal frequency, but he is stretching back to normal, another three inches to go yet, even his signal is louder and good rest, because his signal is louder and clearer than it ever was, even his mobile gear, which is built into a Command tx box, is sound under a 1000 watt power supply. The centre loaded 6 d. whip, his rx is a dual wave Jap. transistor portable.

A similar set-up is used by Eric but his rx is a valve converter into his car radio. Eric's tx covers 40-50-15 mxx against Jack's 40 m. Good luck Jack and Eric, keep it up, one of these days we will start field work here in VK3 and then you can show us how.

Well, chaps, all that remains is for me to say a very Merry Christmas to all VKs and S.W.s., may your DX logs grow to overflowing in the New Year and I am sure all VKs pass on their Xmas Greetings and 73 to all those who are listening to VK3 with them in the coming year.—73, GPH.

TASMANIA

Although conditions were generally very poor, the Jamboree of the Air over the weekend of 23rd and 24th October was an outstanding success. Sixteen stations are known to have participated and nothing but good can arise as a result of the Jamboree.

Keith TRX had the best of conditions by going camping near Sorrell with a Scout troop from Belterrie and he has nothing but praise for that location. Bob TOM is again feeling right, after the severe loss he had at work when the active lead came into contact with the earth to the electric drill at the back of the power point. Charles YCH was operating mobile marine over the week-end, 5th and 6th November, and he certainly chose a rough week-end, with violent storms most of the time. A few more very good Chaps.

Ken YKA is now convinced that the 813 in his rig is a very rugged tube. Can you imagine his surprise and pleasure when he realised that the tube could not be replaced properly after he had effected repairs, following the removal of the 1000 volt h.t. while the screen was operating at its normal potential? Ken also contacted the number of the 813 in his shack, and came to the astounding result that 63 were in operation for over 13 hours continuously during the week-end.

At the time of writing, the club room fund stands at £29/10/0, so we have made a little progress towards our preliminary goal of £1,500. Remember the auction of donated gear for the general fund, the number of items, the surplus gear and buy gear you need. Also, remember the Cabaret on Friday night, 18th Dec., at the Hibernian Club.

GLE did a remarkably good job as our lecturer at the November general meeting on the subject of using a t.v. turret as the basis of a v.h.f. rig. We were all pleased to see George YOC at the same meeting. I understand that YCK and WBGZ have also been in town recently. Jack YB is planning to rebuild and enclosing his rig, and he is passing through some teething troubles, especially with the new modulator, but, knowing you Jack, those troubles will soon be overcome.

The Federal Contest Committee members, and their willing helpers, are delighted that the R.C. Contest is again behind them. We now wait the result.

That raucous noise you have heard on the bands since the middle of October might not

be Asiatic in origin, so just take another listen, it could be my phone. They tell me it sounds natural. With best 73, Ian 1ZZ.

NORTH WESTERN ZONE

Well here we are once again with pen to paper in an attempt to record a little of the activities of the Zone during the past few months.

Our last meeting was held at the Burnie Fire Brigade where a lot of questions were asked and some satisfactorily answered, I hope. The two mobile units, which incidentally are now absolutely completed and believe it or not working, were tried for size in the respective vehicles. No. 1 truck produced no troubles but No. 2 has an auxiliary pumping plant in the front with the driver, which operates with much water splashing; really ideal for radio equipment! Anyway, a spot was found in the seat cavity behind the driver. The layout of the base station was decided on and the Fire Brigade will be erecting shelving, towers, etc. The base tx and rx are practically completed and the modulator and power supply for same is well under way and I do believe a target for the end of November. A talk is in the right circles for "D" day.

A goodly number were present at the meeting and many other topics were naturally discussed. Syd TSB brought along some interesting reports on the Accu-Scan receiver (p. 9, 10, 11). Supper was served in the f.b. amenities room and some rare demonstrations of table tennis were provided by sundry members.

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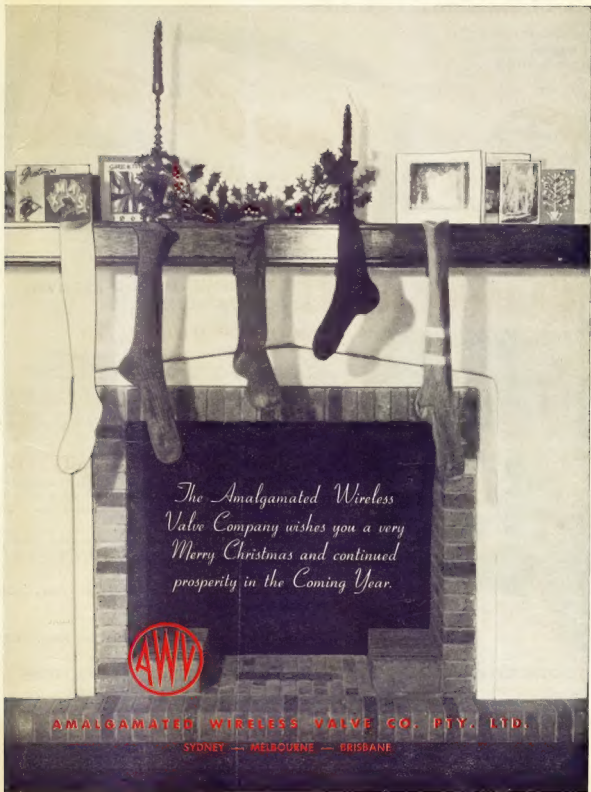
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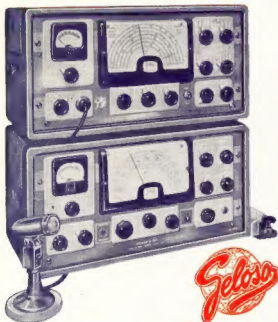
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MODEL G222TR TRANSMITTER

Six H.F. Bands—80 to 10 Metres. Main Features include:—

- Simple, rapid changing of operating frequencies and bands.
- Rapid changing from phone to c.w. operation due to simple switching arrangement.
- "Transmit-Receive" switch simultaneously switches the antenna connection for speedy changing from transmission to reception.
- 6146 tube in the final providing transmitting rating of approximately 65 watts on phone and 75 watts on c.w.

MODEL 209R. Amateur Nett Price: £138/8/2
(F.O.R.) plus Sales Tax.

MODEL G222TR. Amateur Nett Price: £111/3/8
(plus 12½% S.T.) F.O.R. Melbourne.

BOTH GELOSO UNITS AVAILABLE FROM LEADING DISTRIBUTORS

Technical Leaflet giving full details available from:—

Sole Australian Factory Representatives:

Cable: "Cunnig"

R. H. CUNNINGHAM PTY. LTD.

VIC.: 8 BROMHAM PLACE, RICHMOND, 42-1614

N.S.W.: 29 GIBBES ST., CHATSWOOD. 40 0218

S.A.: 14 STAMFORD COURT, ADELAIDE, 51-6392

Q'LD.: 43 BOWEN STREET, BRISBANE, 2-3755

W.A.: KING'S PLACE (off 12 King St.), PERTH. 21 2126